

State of California
The Resources Agency

DEPARTMENT OF WATER RESOURCES
Division of Operations and Maintenance

STATE WATER PROJECT OPERATIONS DATA

For the month of:
September 1998

Pete Wilson
Governor
State of California

Douglas P. Wheeler
Secretary for Resources
The Resources Agency

David N. Kennedy
Director
Department of Water Resources

State of California
The Resources Agency

Department of Water Resources
Division of Operations and Maintenance

**State Water Project
Operations Data**

for the Month of September 1998

Table of Contents

Monthly Highlights

Oroville Field Division Water Operations

Table

- 1 Antelope Lake, Daily Operation
- 2 Frenchman Lake, Daily Operation
- 3 Lake Davis, Daily Operation
- 4 Lake Oroville, Daily Operation
- 5 Thermalito Forebay, Including Diversion Pool and Power Canal, Daily Operation
- 6 Thermalito Afterbay, Daily Operation
- 7 Oroville-Thermalito Complex, Water Temperature Data

Delta Field Division Water Operations

Table

- 8 Aqueduct Operation, Delta Field Division
- 9 Delta Field Division Plant Data
- 10 Clifton Court Forebay, Daily Operation of Gates
- 11 Governor Edmund G. Brown California Aqueduct, Delta Field Division, Monthly Deliveries
- 12 South Bay Aqueduct, Delta Field Division, Monthly Deliveries
- 13 Lake Del Valle, Daily Operation

San Luis Field Division Water Operations

Table

- 14 Consolidated State-Federal O'Neill Forebay, Daily Operations
- 15 Consolidated State-Federal San Luis Reservoir, Daily Operations
- 16 San Luis Field Division Plant Data
- 17 Consolidated State-Federal Los Banos Reservoir, Daily Operations
- 18 Consolidated State-Federal Little Panoche Reservoir, Daily Operations
- 19a Governor Edmund G. Brown California Aqueduct, San Luis Field Division, Monthly Deliveries
- 19b Governor Edmund G. Brown California Aqueduct, San Luis Field Division, Monthly Deliveries
- 20 Consolidated State-Federal San Luis Canal, Daily Operations

San Joaquin Field Division Water Operations

Table

- 21 San Joaquin Field Division Plant Data
- 22a Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries
- 22b Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries
- 22c Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries
- 23 Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries (Coastal Branch)

Southern Field Division Water Operations

Table

- 24 Southern Field Division Plant Data
- 25 Pyramid Lake, Daily Operation
- 26 Elderberry Forebay, Daily Operation
- 27 Castaic Lake, Daily Operation
- 28 Governor Edmund G. Brown California Aqueduct, Southern Field Division, Monthly Deliveries (West Branch)
- 29 Silverwood Lake, Daily Operation
- 30 Lake Perris, Daily Operation
- 31a Governor Edmund G. Brown California Aqueduct, Southern Field Division, Monthly Deliveries (East Branch)
- 31b Governor Edmund G. Brown California Aqueduct, Southern Field Division, Monthly Deliveries (East Branch)

Water Quality Operations

Table

- 32 Water Quality at Selected SWP Locations
- 33 Water Quality at Selected Delta Stations
- 34 Pesticides, Herbicides, and Other Organic Substances Detected in the SWP

Energy Operations

Table

- 35 Oroville and Delta Field Divisions Energy Data
- 36 San Luis Field Division Energy Data
- 37 San Joaquin Field Division Pumping Plant Energy Load Data
- 38 Southern Field Division Energy Data

MONTHLY HIGHLIGHTS

The following highlights are activities or actions that impacted State Water Project operations during the month of September 1998.

September began very warm, but cooled considerably with an outbreak of thunderstorms after Labor Day. The rest of the month was dry except for showers and cool conditions during the last week in Northern California due to a lingering upper level low pressure system. The cold system also brought some early snow to the higher peaks of the Sierra.

Statewide precipitation during September was about 150 percent average, with precipitation for the water year about 175 percent of average. The heaviest precipitation was on the coast from San Francisco to Ventura. Northern Sierra seasonal totals were about 165 percent of average.

Runoff during September was well above average, approximately 170 percent of normal. Runoff for the water year was estimated to be about 175 percent, compared to 145 percent last year, making this the fourth wet water year in a row.

Reservoir storage was about 135 percent of average, and 30 percent more than last year. This resulted in near maximum possible carryover into the new water year. On September 30, total storage in major SWP reservoirs was about 4.39 MAF, compared to 3.2 MAF at this time in 1997. Storage at Lake Oroville was about 2.83 MAF compared to 2.14 MAF at this time last year. The State's share of San Luis Reservoir storage was about 900,000 AF, compared to 462,000 AF at this time last year. The combined storage in our southern reservoirs was 662,000 AF on September 30, compared to 602,000 AF at this time last year.

Through September 30, SWP water deliveries for calendar year 1998 were 1.51 MAF, representing a combination of annual entitlement, carryover, interruptible, and exchange waters. This is 543,000 AF less than delivered during the same period in 1997.

The California Independent System Operator declared stage 1 and stage 2 alerts on a daily basis during early September, signaling that system electrical reserves were at or near critical levels during peak load hours. During the first week of September, DWR continued supplying ancillary service supplemental energy and electrical capacity to the California ISO on a daily basis.

On September 7, in response to the high energy demands, Feather River releases were increased to 8,000 cfs. By September 11, as cooler weather lowered energy demands, releases were decreased to 5,000 cfs.

The Skinner Fish Facility was inundated by up to 10,000 mitten crabs per day during the latter part of September. Although the crabs were seen at the fish facility in previous years during this migratory period, they had never amassed to this level. The crabs made fish salvage operations difficult; however, export operations were not significantly affected.

On September 14, a leak of approximately 9 gallons per minute was discovered in pool 14, Mile 88.51, of the California Aqueduct. This section of the aqueduct has experienced similar leaks in the past. The pool was lowered to minimum, allowing the leak to be repaired.

Drawdown of approximately 145 AF per day continued at Lake Del Valle throughout the month of September in preparation for flood control.

Table 1. Antelope Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 22,566 ac-ft

September 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Aug 31	5000.40	21,108									
1	5000.35	21,063	-45	20	0	0	0				
2	5000.32	21,036	-27	20	0	0	0				
3	5000.24	20,965	-71	20	0	0	0				
4	5000.20	20,930	-35	20	0	0	0				
5	5000.15	20,885	-45	20	0	0	0				
6	5000.10	20,841	-44	20	0	0	0				
7	5000.05	20,797	-44	20	0	0	0				
8	5000.00	20,753	-44	20	0	0	0				
9	4999.96	20,709	-44	20	0	0	0				
10	4999.90	20,656	-53	20	0	0	0				
11	4999.86	20,621	-35	20	0	0	0				
12	4999.82	20,585	-36	20	0	0	0				
13	4999.77	20,541	-44	20	0	0	0				
14	4999.73	20,506	-35	20	0	0	0				
15	4999.67	20,453	-53	20	0	0	0				
16	4999.62	20,409	-44	20	0	0	0				
17	4999.55	20,348	-61	20	0	0	0				
18	4999.50	20,304	-44	20	0	0	0				
19	4999.44	20,251	-53	20	0	0	0				
20	4999.39	20,207	-44	20	0	0	0				
21	4999.34	20,164	-43	20	0	0	0				
22	4999.30	20,129	-35	20	0	0	0				
23	4999.24	20,077	-52	20	0	0	0				
24	4999.19	20,033	-44	20	0	0	0				
25	4999.15	19,998	-35	20	0	0	0				
26	4999.15	19,998	0	20	0	0	0				
27	4999.18	20,024	26	20	0	0	0				
28	4999.14	19,990	-34	20	0	0	0				
29	4999.10	19,955	-35	20	0	0	0				
30	4999.06	19,920	-35	20	0	0	0				
Total cfs-days				---	600	0	0	0	200	800	201
Total ac-ft				-1,188	1,190	0	0	0	397	1,587	399

1/ Values not available on a daily basis.

Table 2. Frenchman Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 55,477 ac-ft

September 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs					Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right				
Aug 31	5582.41	47,081								
1	5582.27	46,881	-200	0	91	0	0			
2	5582.13	46,682	-199	0	91	0	0			
3	5581.97	46,455	-227	0	86	0	0			
4	5581.89	46,342	-113	0	61	0	0			
5	5581.84	46,271	-71	0	50	0	0			
6	5581.76	46,158	-113	0	50	0	0			
7	5581.68	46,045	-113	0	50	0	0			
8	5581.64	45,989	-56	0	36	0	0			
9	5581.63	45,975	-14	0	24	0	0			
10	5581.60	45,933	-42	0	18	0	0			
11	5581.57	45,891	-42	0	12	0	0			
12	5581.55	45,863	-28	0	9	0	0			
13	5581.52	45,820	-43	0	9	0	0			
14	5581.51	45,806	-14	0	9	0	0			
15	5581.47	45,750	-56	0	9	0	0			
16	5581.48	45,764	14	0	9	0	0			
17	5581.42	45,680	-84	0	9	0	0			
18	5581.40	45,652	-28	0	9	0	0			
19	5581.39	45,638	-14	0	9	0	0			
20	5581.37	45,610	-28	0	9	0	0			
21	5581.34	45,568	-42	0	9	0	0			
22	5581.30	45,512	-56	0	9	0	0			
23	5581.28	45,484	-28	0	13	0	0			
24	5581.24	45,428	-56	0	16	0	0			
25	5581.22	45,400	-28	0	16	0	0			
26	5581.33	45,554	154	0	16	0	0			
27	5581.35	45,582	28	0	16	0	0			
28	5581.33	45,554	-28	0	10	0	0			
29	5581.32	45,540	-14	0	7	0	0			
30	5581.32	45,540	0	0	7	0	0			
Total cfs-days				---	0	769	0	0	326	
Total ac-ft				-1,541	0	1,525	0	0	646	
									2,171	
									630	

1/ Values not available on a daily basis.

Table 3. Lake Davis

Daily Operation

(in acre-feet except as noted)

Capacity: 84,371 ac-ft

September 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Aug 31	5770.63	67,757									
1	5770.59	67,614	-143	19	0	4	0				
2	5770.56	67,507	-107	19	0	4	0				
3	5770.52	67,364	-143	19	0	4	0				
4	5770.51	67,329	-35	19	0	4	0				
5	5770.49	67,257	-72	19	0	4	0				
6	5770.49	67,257	0	19	0	4	0				
7	5770.47	67,186	-71	19	0	4	0				
8	5770.41	66,972	-214	18	0	5	0				
9	5770.39	66,901	-71	18	0	5	0				
10	5770.36	66,795	-106	18	0	5	0				
11	5770.32	66,653	-142	19	0	4	0				
12	5770.30	66,582	-71	19	0	4	0				
13	5770.27	66,475	-107	19	0	4	0				
14	5770.25	66,405	-70	19	0	4	0				
15	5770.24	66,369	-36	19	0	4	0				
16	5770.20	66,228	-141	19	0	4	0				
17	5770.16	66,087	-141	19	0	4	0				
18	5770.13	65,981	-106	19	0	4	0				
19	5770.10	65,875	-106	19	0	4	0				
20	5770.07	65,734	-141	19	0	4	0				
21	5770.04	65,664	-70	20	0	4	0				
22	5770.00	65,523	-141	20	0	4	0				
23	5769.97	65,418	-105	20	0	4	0				
24	5769.96	65,382	-36	20	0	4	0				
25	5769.94	65,312	-70	20	0	4	0				
26	5770.03	65,628	316	21	0	1	0				
27	5770.06	65,734	106	23	0	0	0				
28	5770.06	65,734	0	12	0	0	0				
29	5770.06	65,734	0	5	0	0	0				
30	5770.05	65,699	-35	17	0	0	0				
Total cfs-days				---	555	0	100	0	804	1,459	
Total ac-ft				-2,058	1,101	0	198	0	1,595	2,894	
421											

1/ Values not available on a daily basis.

Table 4. Lake Oroville

Daily Operation

(in acre-feet except as noted)

Capacity: 3,537,580 ac-ft

September 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow					Inflow	
				Hyatt Powerplant Generation 1/	Palermo Canal	Evaporation 2/	Spill	Total Outflow	Hyatt Powerplant Pumpback	Computed Inflow 3/
Aug 31	868.14	3,059,166								
1	867.24	3,046,363	-12,803	20,207	40	456	0	20,703	0	7,900
2	866.28	3,032,749	-13,614	20,370	40	402	0	20,812	0	7,198
3	865.46	3,021,154	-11,595	18,997	40	372	0	19,409	0	7,814
4	864.54	3,008,182	-12,972	20,187	40	447	0	20,674	0	7,702
5	864.67	3,010,013	1,831	6,816	40	380	0	7,236	0	9,067
6	864.39	3,006,071	-3,942	11,002	40	228	0	11,270	0	7,328
7	863.42	2,992,444	-13,627	20,672	40	341	0	21,053	0	7,426
8	862.66	2,981,797	-10,647	16,770	40	398	0	17,208	0	6,561
9	862.18	2,975,087	-6,710	12,330	40	349	0	12,719	0	6,009
10	861.35	2,963,509	-11,578	17,610	40	226	0	17,876	0	6,298
11	860.92	2,957,523	-5,986	12,670	40	301	0	13,011	0	7,025
12	860.67	2,954,047	-3,476	11,227	40	310	0	11,577	0	8,101
13	860.59	2,952,935	-1,112	7,582	40	413	0	8,035	0	6,923
14	859.88	2,943,081	-9,854	17,293	40	366	0	17,699	0	7,845
15	859.65	2,939,894	-3,187	11,850	40	355	0	12,245	0	9,058
16	859.06	2,931,729	-8,165	14,992	40	318	0	15,350	0	7,185
17	858.24	2,920,408	-11,321	16,547	40	270	0	16,857	0	5,536
18	857.80	2,914,346	-6,062	12,463	40	297	0	12,800	0	6,738
19	857.75	2,913,657	-689	6,899	40	241	0	7,180	0	6,491
20	857.95	2,916,411	2,754	4,849	40	241	0	5,130	0	7,884
21	857.18	2,905,819	-10,592	14,967	40	269	0	15,276	0	4,684
22	856.12	2,891,282	-14,537	19,554	40	232	0	19,826	0	5,289
23	855.10	2,877,342	-13,940	18,928	40	184	0	19,152	0	5,212
24	854.74	2,872,433	-4,909	12,283	40	166	0	12,489	0	7,580
25	854.07	2,863,313	-9,120	12,232	40	138	0	12,410	0	3,290
26	853.92	2,861,273	-2,040	8,532	40	147	0	8,719	0	6,679
27	853.78	2,859,371	-1,902	7,212	40	73	0	7,325	0	5,423
28	853.23	2,851,907	-7,464	13,041	40	64	0	13,145	0	5,681
29	852.30	2,839,317	-12,590	17,030	40	128	0	17,198	0	4,608
30	851.72	2,831,485	-7,832	13,514	40	137	0	13,691	0	5,859
Total		-227,681	418,626	1,200	8,249	0	428,075	0	200,394	

1/ Includes bypass flows

2/ Evaporation will be zero for days when there is precipitation or heavy overcast.

3/ Does not include pumpback.

**Table 5. Thermalito Forebay
Including Diversion Pool and Power Canal**

Daily Operation

(in acre-feet except as noted)

September 1998

Capacity: 25,120 ac-ft

Date	Storage 1/	Storage Change	Inflow			Outflow					Losses (-) And Gains (+)
			Lake Oroville Releases 2/	Kelly Ridge Generation	Thermalito Pumping- Generating Plant Pumpback	Thermalito Pumping- Generating Plant Generation 3/	Butte County	Thermalito Irrigation District	Releases To River 4/	Hyatt Powerplant Pumpback	
Aug 31	22,991										
1	23,403	412	20,207	508	0	19,271	0	9	1,246	0	223
2	23,583	180	20,370	504	0	19,764	0	9	1,302	0	381
3	23,281	-302	18,997	526	0	18,756	0	10	1,292	0	233
4	23,137	-144	20,187	482	0	19,811	0	10	1,258	0	266
5	23,661	524	6,816	454	0	5,930	0	10	1,290	0	484
6	23,476	-185	11,002	506	0	10,232	0	10	1,256	0	-195
7	23,000	-476	20,672	508	0	20,698	0	10	1,260	0	312
8	23,253	253	16,770	504	0	16,014	0	10	1,264	0	267
9	23,944	691	12,330	504	0	11,140	0	10	1,254	0	261
10	23,887	-57	17,610	506	0	17,608	0	10	1,274	0	719
11	23,646	-241	12,670	502	0	11,879	0	10	1,278	0	-246
12	23,772	126	11,227	506	0	10,520	0	10	1,266	0	189
13	23,435	-337	7,582	442	0	7,220	0	10	1,276	0	145
14	23,510	75	17,293	452	0	16,669	0	10	1,270	0	279
15	23,225	-285	11,850	502	0	11,528	0	10	1,274	0	175
16	23,873	648	14,992	502	0	13,838	0	10	1,236	0	238
17	23,586	-287	16,547	520	0	16,310	0	10	1,228	0	194
18	23,809	223	12,463	484	0	11,676	0	10	1,234	0	196
19	23,718	-91	6,899	421	0	6,341	0	10	1,242	0	182
20	23,817	99	4,849	417	0	4,016	0	10	1,226	0	85
21	23,787	-30	14,967	500	0	14,435	0	10	1,226	0	174
22	23,039	-748	19,554	502	0	19,736	0	10	1,248	0	190
23	23,119	80	18,928	506	0	18,339	0	10	1,252	0	247
24	23,443	324	12,283	504	0	11,470	0	10	1,268	0	285
25	23,305	-138	12,232	506	0	11,848	0	10	1,250	0	232
26	23,432	127	8,532	508	0	7,815	0	10	1,238	0	150
27	23,339	-93	7,212	502	0	6,509	0	10	1,296	0	8
28	23,284	-55	13,041	135	0	11,998	1	10	1,292	0	70
29	23,393	109	17,030	0	0	15,784	1	10	1,244	0	118
30	23,192	-201	13,514	0	0	12,764	1	10	1,246	0	306
Total		201	418,626	13,413	0	399,919	3	298	37,786	0	6,168

1/ Sum of Thermalito Forebay and Diversion Pool.

2/ Sum of releases from Lake Oroville through Hyatt plant and spill.

3/ Includes Bypass flows, if any, at Thermalito.

4/ The sum of the flows from fish barrier dam and the fish hatchery.

Table 6. Thermalito Afterbay

Daily Operation

(in acre-feet except as noted)

Capacity: 57,040 ac-ft

September 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow					Losses (-) and Gains (+)	Total Releases to River 2/
				Thermalito Pumping-Generating Plant Generation 1/	Sutter Butte Canal	Western Canal Lateral	Richvale Canal	Western Canal	Afterbay River Outlet	Thermalito Pumping-Generating Plant Pumpback		
Aug 31	132.04	39,266										
1	133.09	43,185	3,919	19,271	2,579	18	680	1,075	10,671	0	-329	11,917
2	133.99	46,681	3,496	19,764	2,499	18	593	1,016	11,643	0	-499	12,945
3	134.42	48,390	1,709	18,756	2,460	19	528	934	12,575	0	-531	13,867
4	134.93	50,453	2,063	19,811	2,400	20	512	871	13,726	0	-219	14,984
5	131.90	38,756	-11,697	5,930	2,321	13	476	849	13,726	0	-242	15,016
6	129.91	31,853	-6,903	10,232	2,261	6	462	821	13,726	0	141	14,982
7	130.72	34,586	2,733	20,698	2,241	6	464	758	13,984	0	-512	15,244
8	130.09	32,451	-2,135	16,014	2,162	4	462	670	14,718	0	-133	15,982
9	128.07	26,041	-6,410	11,140	2,023	1	460	581	14,162	0	-323	15,416
10	128.89	28,563	2,522	17,608	2,003	0	397	518	11,822	0	-346	13,096
11	128.54	27,473	-1,090	11,879	1,966	0	331	444	9,977	0	-251	11,255
12	128.50	27,349	-124	10,520	1,845	0	248	351	8,033	0	-167	9,299
13	127.76	25,116	-2,233	7,220	1,755	0	214	313	6,863	0	-308	8,139
14	130.04	32,285	7,169	16,669	1,771	0	216	315	6,744	0	-454	8,014
15	130.74	34,655	2,370	11,528	1,805	0	216	313	6,744	0	-80	8,018
16	131.70	38,034	3,379	13,838	1,718	0	194	268	7,974	0	-305	9,210
17	132.89	42,425	4,391	16,310	1,638	0	163	198	9,441	0	-479	10,669
18	132.57	41,222	-1,203	11,676	1,488	0	147	151	10,731	0	-362	11,965
19	130.87	35,104	-6,118	6,341	1,410	0	123	133	10,711	0	-82	11,953
20	128.31	26,767	-8,337	4,016	1,351	0	105	135	10,711	0	-51	11,937
21	128.91	28,625	1,858	14,435	1,279	0	107	137	10,731	0	-323	11,957
22	131.07	35,800	7,175	19,736	1,242	0	105	137	10,731	0	-346	11,979
23	132.61	41,372	5,572	18,339	1,258	0	105	137	10,711	0	-556	11,963
24	132.36	40,442	-930	11,470	1,252	0	69	137	10,731	0	-211	11,999
25	132.21	39,888	-554	11,848	1,194	0	46	171	10,731	0	-260	11,981
26	131.01	35,590	-4,298	7,815	1,087	0	46	232	10,731	0	-17	11,969
27	129.35	30,025	-5,565	6,509	1,018	0	48	175	10,711	0	-122	12,007
28	129.25	29,704	-321	11,998	976	0	54	135	10,711	0	-443	12,003
29	130.35	33,325	3,621	15,784	966	0	61	135	10,711	0	-290	11,955
30	130.54	33,970	645	12,764	956	0	63	137	10,731	0	-232	11,977
Total			-5,296	399,919	50,924	105	7,695	12,247	325,912	0	-8,332	363,698

1/ Includes Bypass flows, if any, at Thermalito.

2/ The sum of the flows from the fish barrier dam, fish hatchery, and afterbay river outlet.

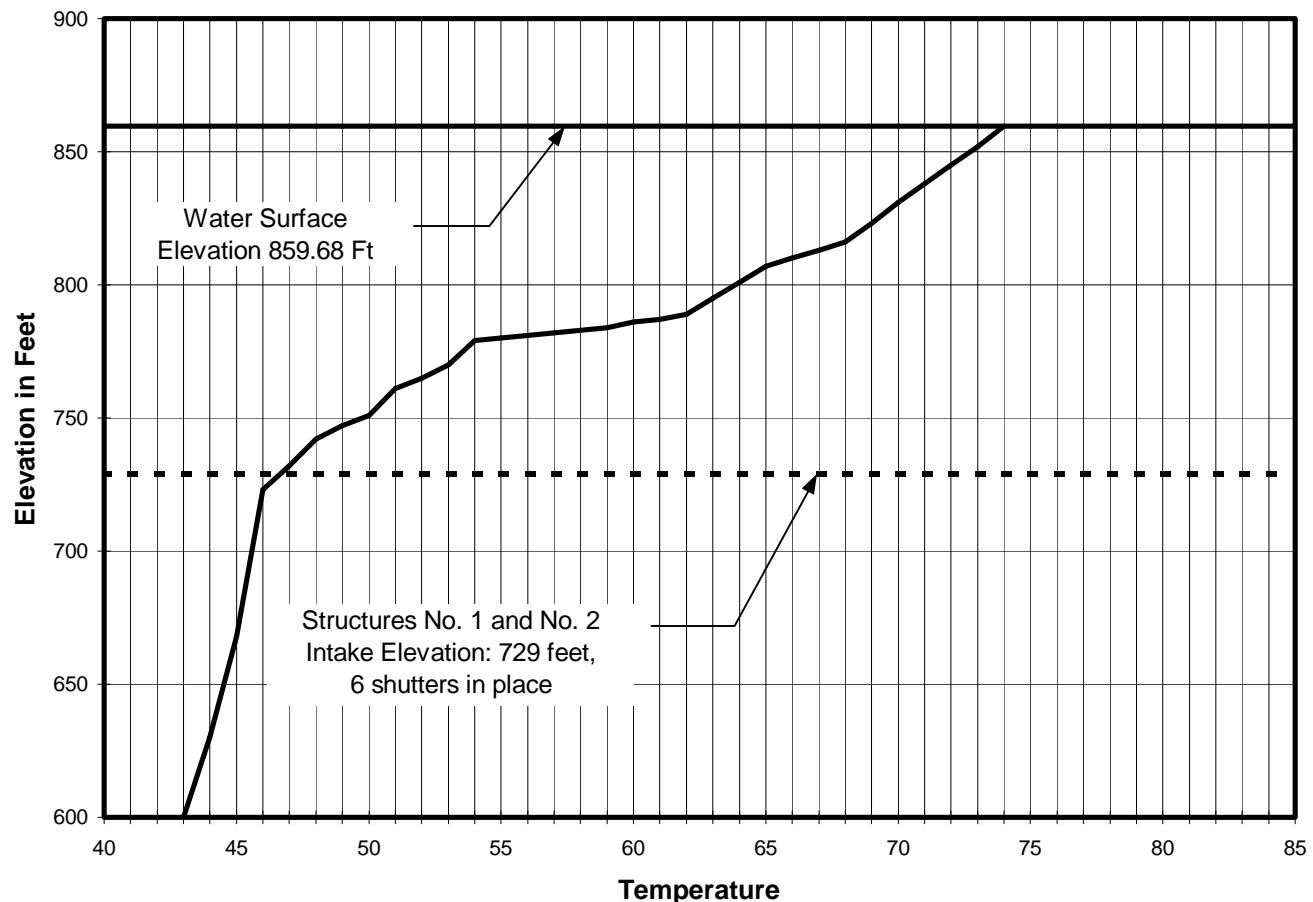
Table 7. Oroville-Thermalito Complex

Water Temperature Data

(in degrees Fahrenheit)

September 1998

Date	Mean Daily Temperature	
	Thermalito Afterbay Outlet	Fish Hatchery
1	62	56
2	61	54
3	62	52
4	60	51
5	59	50
6	60	51
7	59	51
8	57	51
9	57	51
10	57	51
11	57	51
12	57	51
13	58	51
14	59	52
15	59	51
16	58	51
17	57	51
18	57	51
19	57	51
20	57	52
21	58	52
22	57	52
23	55	52
24	55	52
25	55	52
26	55	52
27	56	52
28	56	52
29	55	52
30	55	53

**Lake Oroville Temperature Profile
on September 16, 1998**

Note: Water surface elevations on Table 4 are taken at Oroville Dam at midnight and may differ slightly from those shown on this table which are normally taken at mid-day and upstream from Oroville Dam.

Table 8. Aqueduct Operation**Delta Field Division**

(in acre-feet except as noted)

September 1998North Bay Aqueduct

Pumped at Barker Slough Pumping Plant	4,323
Travis Turnout	346
Fairfield/Vacaville Turnout	1,469
Pumped at Cordelia Pumping Plant	2,343
Cordelia Pumping Plant Spillway	0
Computed Losses (-) or Gains (+)	-165
Benicia Turnout	1,292
Vallejo Turnout	803
American Canyon 1	196
American Canyon 2	10
Napa City Turnout	42
Total Deliveries (After Cordelia)	2,343
Change in Storage at Napa Terminal Tank	0

California Aqueduct

Amount Pumped at Banks Pumping Plant	266,204
Amount Pumped at South Bay Pumping Plant	9,383
Deliveries From California Aqueduct (Oak Flat Water District, Tracy Golf, Veterans Cemetery, and Musco Olive)	660
Inflow into California Aqueduct	0
Change in Storage	87
Flow Past Check 12	251,878
Computed Losses (-) or Gains (+)	-4,196

Table 9. Delta Field Division Plant Data

(in acre-feet)

September 1998

Date	North Bay Aqueduct		California Aqueduct		South Bay Aqueduct			
	Barker Slough Pumping Plant	Cordelia Pumping Plant	Banks Pumping Plant		South Bay Pumping Plant	Del Valle Pumping Plant		
			Total	SWP		Into Lake	Into Aqueduct	Gravity Flow Through Plant Into Aqueduct
1	181	80	7,051	7,051	403	0	0	124
2	206	95	4,969	4,969	394	0	0	135
3	182	82	6,843	6,843	366	0	0	136
4	215	102	7,969	7,969	319	0	0	121
5	205	90	7,934	7,934	358	0	0	123
6	182	77	10,352	10,352	345	0	0	131
7	209	95	9,126	9,126	333	0	0	114
8	212	101	6,121	6,121	341	0	0	115
9	174	84	7,987	7,987	198	0	0	207
10	158	72	6,736	6,736	304	0	0	156
11	168	78	7,942	7,942	348	0	0	136
12	194	90	9,671	9,671	325	0	0	124
13	199	90	12,411	12,411	345	0	0	136
14	171	76	8,357	8,357	349	0	0	129
15	174	78	5,683	5,683	362	0	0	109
16	190	87	8,603	8,603	358	0	0	106
17	160	74	6,704	6,704	349	0	0	116
18	158	87	6,901	6,901	347	0	0	134
19	102	83	9,732	9,732	321	0	0	133
20	172	69	11,424	11,424	337	0	0	131
21	75	71	8,383	8,383	351	0	0	131
22	87	87	8,413	8,413	299	0	0	130
23	78	74	8,887	8,887	263	0	0	136
24	96	91	8,465	8,465	295	0	0	134
25	95	88	11,508	11,508	294	0	0	134
26	47	43	12,072	12,072	281	0	0	133
27	47	41	11,640	11,640	263	0	0	132
28	62	51	11,321	11,321	223	0	0	137
29	63	58	10,038	10,038	153	0	0	139
30	61	49	12,961	12,961	159	0	0	139
Total	4,323	2,343	266,204	266,204	9,383	0	0	3,961

Table 10. Clifton Court Forebay
Daily Operation of Gates

September 1998

Date	Time Opened	Time Closed	Amount of inflow in Acre-Feet	Date	Time Opened	Time Closed	Amount of inflow in Acre-Feet
1	---	00:24		16	03:12	09:00	
	02:49	06:55			14:16	19:55	8,753
	13:15	19:26	7,369	17	00:05	02:34	
2	00:01	01:25			05:04	10:00	
	03:46	06:45			15:35	19:02	6,770
	17:00	19:50		18	01:20	03:24	
	23:27	---	4,316		05:56	10:45	
3	---	02:16			16:20	21:10	6,917
	04:40	08:52		19	02:12	04:07	
	15:24	20:11	7,655		06:43	11:40	
4	00:33	03:03		20	15:56	22:20	9,895
	05:29	10:23			02:47	04:46	
	16:03	21:25	8,475		07:26	12:05	
5	01:21	03:45			16:01	---	10,336
	06:34	10:45		21	---	00:08	
	16:50	21:50	8,091		02:45	05:21	
6	02:30	04:30			06:45	11:52	
	07:10	12:00			20:36	---	8,569
	17:00	23:45	9,969	22	---	01:57	
7	03:20	05:14			04:57	12:02	
	07:59	12:47			21:00	22:45	8,606
	17:30	---	9,536	23	00:05	02:32	
8	---	00:30			05:32	12:25	
	04:00	12:05			21:29	23:50	8,818
	21:32	---	7,510	24	00:04	02:36	
9	---	00:50			06:11	12:33	
	05:52	13:52			18:23	19:09	
	22:12	---	6,886		21:57	---	8,426
10	---	02:20		25	---	03:48	
	06:45	13:30			06:48	14:54	
	22:58	---	6,231		17:10	19:45	
11	---	04:40			22:32	---	10,732
	07:58	14:15		26	---	04:35	
	20:29	20:49			07:35	15:49	
	23:49	---	7,425		17:35	20:27	
12	---	04:45			23:06	---	12,029
	08:52	15:48	9,605	27	---	05:17	
13	00:48	06:35			08:27	21:22	10,640
	10:05	19:09		28	00:02	05:30	
	19:54	23:10	12,691		09:24	22:43	11,493
14	02:30	08:21		29	01:04	07:15	
	11:21	17:31	8,357		10:35	17:50	10,457
15	02:59	08:06		30	02:04	08:25	
	13:47	18:21	6,648		11:40	21:55	13,246

Total inflow for the month 266,451 AF

**Table 11. Governor Edmund G. Brown California Aqueduct
Delta Field Division, Monthly Deliveries**

(In acre-feet)

September 1998

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries					
	Beginning and Ending				Entitle-ment	USBR	Misc.	Loan Water	1997 Carryover Ent.	
	No.	Structure	Mile							
2A	1	Banks Pumping Plant	3.32		266,204					
	1	South Bay Pumping Plant	4.49	Bethany Reservoir Inlet	9,383					
		Check No. 1	5.95							
	2	Check No. 2	12.01							
	3		12.47	Musco Olive	15					
		Check No. 3	18.29							
	4		22.16	Tracy Golf & Country Club	47					
		Check No. 4	23.99							
	5	Check No. 5	29.73							
	6	Check No. 6	34.24							
	7		35.22	Turlock Fruit Company Inflow	0					
		Check No. 7	39.91							
2B	8		42.46	Oak Flat Water District-A	64					
			43.81	Oak Flat Water District-B	344					
			44.64	Oak Flat Water District-C	56					
		Check No. 8	45.97							
	9		46.18	Oak Flat Water District-D	130	130				
				Oak Flat Totals:	594	594	0	0	0	
		Check No. 9	51.30							
	10	Check No. 10	56.86							
	11	Check No. 11	61.40							
	12		66.14	Veteran's Cemetery	4					
		Check No. 12	66.71		251,878		4			

Table 12. South Bay Aqueduct
Delta Field Division, Monthly Deliveries

(In acre-feet)

September 1998

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries				
	Beginning and Ending				Entitlement	General Wheeling	Local	Recreation	
	No.	Structure	Mile						
1	1	South Bay Pumping Plant	0.00	(into South Bay Aqueduct)	9,383	5	26	905	
			3.17	Granite - Vasco Rd. (Temp.)	0				
			3.18	Oakland Scavenger Zone 7	5				
	2	Check No. 1	3.91						
		Check No. 2	5.21						
2	3		7.21	Zone 7 Altamont	26	222	48	160	
		Check No. 3	9.49	Zone 7 Patterson Stored Exchange	0				
				Zone 7 Patterson Project Water	905				
	4	Check No. 4	10.68						
4	5	Check No. 5	12.29			57	700	20	
	6		13.55	Zone 7 Wente #1	222				
			14.16	Zone 7 Wente #2	48				
		Check No. 6	14.65						
	7		14.78	Zone 7 Arroyo Mocho	160				
		Check No. 7	16.38						
			16.57	Zone 7 Wente #3	57				
	8		16.69	Zone 7 Norman Nursery	0				
			16.70	Zone 7 Concannon Stored Exchange	0				
		Del Valle Branch Pipeline Junction	18.63	(Flow into Lake Del Valle)	0				
5	8			(Flow into South Bay Aqueduct)	3,961	170	200	22	
		Deliveries through Del Valle Branch Pipeline		Arroyo Valle #1 & #2 Inflow Released	0				
				Arroyo Valle #1 & #2 Project Water	170				
				Lake Del Valle Recreation	20				
				Zone 7 Wente #5	136				
			19.20	So. Livermore Project	2,464				
6				So. Livermore Inflow Released	22	1,764	700	22	
				So. Livermore Stored Exchanged	0				
			19.21	Zone 7 - Kalthrof Detjens	200				
7		La Costa Tunnel	22.50	ACWD Vallecitos	662	662			
			25.97	City of San Francisco San Antonio	0				
8		Mission Tunnel	28.97	ACWD - Bayside 1 & 2 Project Water: Inflow Released Stored Exchange:	2,415 0 0	2,415			
			35.86	S.C.V.W.D. Meter	5,842				

Capacity: 77,106 ac-ft

Table 13. Lake Del Valle
Daily Operation
(in acre-feet except as noted)

September 1998

Date	Water Surface Elevation (feet)	Storage	Storage Change	Inflow			Outflow				Precipitation (inches)
				Natural 1/ 3/	From South Bay Aqueduct	Arroyo Valle	South Bay Aqueduct	Recreation Deliveries 2/	Evaporation	Total Outflow 3/	
Aug 31	695.84	35,045			0	0	124	0	17	141	0.00
1	695.64	34,916	-129		0	0	135	0	16	151	0.00
2	695.40	34,760	-156		0	0	136	0	16	152	0.00
3	695.19	34,625	-135		0	0	121	0	16	137	0.00
4	694.96	34,476	-149		0	0	123	0	16	139	0.00
5	694.76	34,348	-128		0	0	131	0	11	142	0.00
6	694.55	34,213	-135		0	0	114	0	14	128	0.00
7	694.32	34,066	-147		0	0	115	0	13	128	0.00
8	694.11	33,932	-134		0	0	207	0	11	218	0.05
9	693.75	33,704	-228		0	0	156	0	9	165	0.00
10	693.48	33,533	-171		0	0	136	1	11	148	0.00
11	693.25	33,387	-146		0	0	124	1	15	140	0.00
12	693.02	33,243	-144		0	0	136	1	13	150	0.00
13	692.80	33,105	-138		0	0	129	1	13	143	0.00
14	692.56	32,954	-151		0	0	109	1	11	121	0.00
15	692.35	32,823	-131		0	0	106	1	11	118	0.00
16	692.13	32,687	-136		0	0	116	1	11	128	0.00
17	691.91	32,550	-137		0	0	134	1	11	146	0.00
18	691.68	32,408	-142		0	0	133	1	11	145	0.00
19	691.45	32,266	-142		0	0	131	1	12	144	0.00
20	691.23	32,131	-135		0	0	131	1	8	140	0.00
21	691.01	31,996	-135		0	0	130	1	8	139	0.00
22	690.79	31,861	-135		0	0	136	1	9	146	0.00
23	690.56	31,721	-140		0	0	134	1	5	140	0.00
24	690.34	31,587	-134		0	0	134	1	6	141	0.00
25	690.10	31,442	-145		0	0	133	1	7	141	0.04
26	689.90	31,321	-121		0	0	132	1	6	139	0.04
27	689.69	31,195	-126		0	0	137	1	2	140	0.00
28	689.45	31,050	-145		0	0	139	1	5	145	0.00
29	689.22	30,913	-137		0	0	139	1	4	144	0.00
30	688.98	30,770	-143		0	0	139				
Total		-4,275		22	0	0	3,961	20	316	4,297	0.13

1/ Total inflow from stream gaging station above Lang Canyon and accretions/depletions.

2/ To East Bay Regional Park District.

3/ Not available on a daily basis.

NR=No Records

Table 14. Consolidated State-Federal O'Neill Forebay
 Daily Operations
September 1998

United States
 Department of the Interior
 Bureau of Reclamation
 Central Valley Project

State of California
 The Resources Agency
 Department of Water Resources
 State Water Project

Capacity: 56,430 Acre-feet

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)				Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)
				Pump In 1/	O'Neill Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	California Aqueduct	O'Neill Pumping Generating Plant (Generation)	Gianelli Pumping Generating Plant (Pumped)	Dos Amigos Pumping Plant 2/		
Aug 31	223.00	51,046										
1	222.40	49,447	-1,599	0	1,322	2,536	3,468	0	465	7,315	38	-314
2	220.08	43,360	-6,087	0	1,134	2,228	2,056	0	1,334	7,229	35	111
3	219.64	42,222	-1,138	0	841	3,032	3,204	0	0	7,236	34	-381
4	220.37	44,114	1,892	0	773	3,900	3,678	0	0	7,430	33	66
5	221.89	48,098	3,984	0	1,069	3,661	3,982	0	0	6,672	32	1
6	222.64	50,086	1,988	0	1,410	0	4,943	0	444	4,899	33	25
7	222.29	49,155	-931	0	1,724	0	4,430	0	1,777	4,681	27	-138
8	220.92	45,551	-3,604	0	1,777	2,158	2,885	0	2,592	6,005	26	-14
9	221.42	46,863	1,312	0	1,580	1,286	3,585	0	789	5,033	28	60
10	221.40	46,810	-53	0	1,567	0	3,196	0	0	4,757	28	-5
11	220.99	45,734	-1,076	0	1,558	0	3,678	0	1,766	4,049	28	65
12	220.77	45,158	-576	0	1,563	0	4,661	0	2,616	3,985	27	114
13	220.74	45,080	-78	0	1,374	0	6,161	0	3,454	4,346	27	253
14	220.88	45,446	366	0	1,374	46	4,120	0	1,841	3,727	22	235
15	220.87	45,420	-26	0	1,341	830	2,607	0	1,658	3,208	21	96
16	220.89	45,472	52	0	1,332	16	3,732	0	1,851	2,924	21	-258
17	220.15	43,541	-1,931	0	1,123	0	3,350	0	1,866	3,553	20	-8
18	219.60	42,119	-1,422	0	982	0	3,302	0	1,245	3,580	21	-155
19	220.02	43,204	1,085	0	987	0	4,404	0	1,699	3,064	20	-61
20	219.14	40,940	-2,264	0	1,162	0	5,592	0	4,038	3,793	20	-44
21	219.32	41,400	460	0	1,177	0	3,721	0	1,355	3,220	20	-71
22	219.26	41,247	-153	0	1,018	0	4,079	0	1,803	3,330	18	-23
23	219.47	41,785	538	0	930	0	4,503	0	1,931	3,180	17	-34
24	220.10	43,411	1,626	0	1,056	0	3,784	0	673	3,200	16	-131
25	219.11	40,864	-2,547	0	1,139	0	5,706	0	3,203	4,828	15	-83
26	219.82	42,686	1,822	0	1,142	0	5,777	0	2,722	3,128	5	-145
27	219.18	41,042	-1,644	0	1,312	0	5,775	0	4,928	3,119	5	136
28	219.92	42,945	1,903	0	1,484	0	5,419	0	2,789	2,973	5	-177
29	220.03	43,230	285	0	1,351	0	4,892	0	2,772	3,199	5	-123
30	221.21	46,311	3,081	0	1,221	0	6,293	0	2,212	3,712	5	-32
Total			-4,735	0	37,823	19,693	126,983	0	53,823	131,375	652	-1,035
Mean cfs ac-ft			---	0	1,261	656	4,233	0	1,794	4,379	22	-35
			-4,735	0	75,023	39,062	251,878	0	106,753	260,581	1,294	-2,070

1/ Pump-in located at Mile 79.67R.

2/ Includes 0 AF delivered to DFG at O'Neill Forebay; does not include Parks and Recreation deliveries shown on Table 19.

Total Parks and Recreation deliveries for the year are included in December's operation report.

Table 15. Consolidated State-Federal San Luis Reservoir

Daily Operations

September 1998

United States

Department of the Interior

Bureau of Reclamation

Central Valley Project

State of California

The Resources Agency

Department of Water Resources

State Water Project

Capacity: 2,027,835 ac-ft

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)	Outflow (cfs)			Computed Losses (-) Gains (+) (cfs)
				Gianelli Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	Pacheco Tunnel 1/	Sisk Dam Spill	
Aug 31	505.09	1,566,459						
1	504.63	1,561,115	-5,344	465	2,536	203	0	-420
2	504.49	1,559,490	-1,625	1,334	2,228	199	0	274
3	503.97	1,553,460	-6,030	0	3,032	199	0	191
4	503.27	1,545,354	-8,106	0	3,900	197	0	10
5	502.60	1,537,609	-7,745	0	3,661	198	0	-46
6	502.57	1,537,263	-346	444	0	189	0	-429
7	502.87	1,540,729	3,466	1,777	0	197	0	167
8	502.91	1,541,191	462	2,592	2,158	189	0	-12
9	502.72	1,538,995	-2,196	789	1,286	187	0	-423
10	502.69	1,538,649	-346	0	0	190	0	16
11	502.92	1,541,306	2,657	1,766	0	194	0	-232
12	503.26	1,545,238	3,932	2,616	0	192	0	-442
13	503.79	1,551,374	6,136	3,454	0	131	0	-229
14	504.05	1,554,387	3,013	1,841	46	163	0	-113
15	504.11	1,555,082	695	1,658	830	185	0	-293
16	504.40	1,558,446	3,364	1,851	16	185	0	46
17	504.66	1,561,464	3,018	1,866	0	183	0	-161
18	504.82	1,563,322	1,858	1,245	0	187	0	-121
19	505.07	1,566,226	2,904	1,699	0	188	0	-47
20	505.63	1,572,739	6,513	4,038	0	186	0	-568
21	505.81	1,574,835	2,096	1,355	0	185	0	-113
22	506.03	1,577,397	2,562	1,803	0	194	0	-317
23	506.27	1,580,194	2,797	1,931	0	178	0	-343
24	506.35	1,581,127	933	673	0	173	0	-30
25	506.82	1,586,610	5,483	3,203	0	165	0	-274
26	507.19	1,590,932	4,322	2,722	0	184	0	-359
27	507.96	1,599,937	9,005	4,928	0	184	0	-204
28	508.36	1,604,623	4,686	2,789	0	184	0	-243
29	508.76	1,609,313	4,690	2,772	0	171	0	-236
30	509.08	1,613,068	3,755	2,212	0	171	0	-148
Total			46,609	53,823	19,693	5,531	0	-5,099
Mean cfs ac-ft			----- 46,609	1,794 106,753	656 39,062	184 10,969	0	-170 -10,113

1/ Pacheco Tunnel, San Felipe Split; Santa Clara: 7,191 AF, San Benito: 3,778 AF.

Table 16. San Luis Field Division Plant Data

(in acre-feet)

September 1998

Date	Dos Amigos Pumping Plant		Gianelli Pumping - Generating Plant				San Felipe Project
	Total Pumping	SWP Pumping 1/, 2/	Total Generation	SWP Generation 1/, 2/	Total Pumping	SWP Pumping 1/, 2/	Federal
1	14,509	10,614	5,030	2,657	922	922	403
2	14,339	10,448	4,419	4,420	2,646	2,645	395
3	14,353	10,473	6,014	6,014	0	0	395
4	14,737	10,792	7,736	3,541	0	0	391
5	13,234	9,279	7,262	1,923	0	0	393
6	9,717	5,725	0	0	881	881	375
7	9,285	5,454	0	0	3,525	3,524	391
8	11,911	7,926	4,280	4,281	5,141	5,141	375
9	9,983	6,079	2,551	2,550	1,565	1,565	371
10	9,436	6,801	0	0	0	0	377
11	8,031	6,533	0	0	3,503	1,429	385
12	7,904	6,405	0	0	5,189	3,749	381
13	8,620	7,092	0	0	6,851	2,725	260
14	7,393	5,887	91	92	3,652	988	323
15	6,363	4,875	1,646	1,646	3,289	567	367
16	5,800	4,299	33	32	3,671	1,265	367
17	7,047	5,614	0	0	3,701	996	363
18	7,101	5,696	0	0	2,469	1,014	371
19	6,077	4,784	0	0	3,370	1,936	373
20	7,523	6,190	0	0	8,009	2,512	369
21	6,387	5,118	0	0	2,688	15	367
22	6,605	5,330	0	0	3,576	947	385
23	6,308	5,034	0	0	3,830	-30	353
24	6,347	5,050	0	0	1,335	150	343
25	9,576	8,283	0	0	6,353	5,151	327
26	6,204	5,164	0	0	5,399	5,399	365
27	6,187	5,105	0	0	9,775	3,294	365
28	5,897	4,869	0	0	5,531	4,325	365
29	6,344	5,290	0	0	5,496	4,305	339
30	7,363	6,269	0	0	4,386	3,204	337
Total	260,581	196,478	39,062	27,156	106,753	58,619	10,969

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping;

adjustments to SWP water shares are made to balance the mismatch.

2/ Provisional, subject to change.

Table 17. Consolidated State-Federal Los Banos Reservoir

Daily Operations
September 1998

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

State of California
The Resources Agency
Department of Water Resources
State Water Project

Capacity: 34,560 ac-ft

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Estimated Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft)
					Spill	Outlet	
Aug 31	328.71	21,005					
1	328.70	21,000	-5	0	0	0	-5
2	328.69	20,996	-4	0	0	0	-4
3	328.67	20,986	-10	0	0	0	-10
4	328.64	20,972	-14	0	0	0	-14
5	328.63	20,967	-5	0	0	0	-5
6	328.63	20,967	0	0	0	0	0
7	328.62	20,963	-4	0	0	0	-4
8	328.58	20,944	-19	0	0	0	-19
9	328.52	20,915	-29	0	0	0	-29
10	328.52	20,915	0	0	0	0	0
11	328.51	20,910	-5	0	0	0	-5
12	328.50	20,906	-4	0	0	0	-4
13	328.49	20,901	-5	0	0	0	-5
14	328.48	20,896	-5	0	0	0	-5
15	328.46	20,887	-9	0	0	0	-9
16	328.45	20,882	-5	0	0	0	-5
17	328.41	20,863	-19	0	0	0	-19
18	328.39	20,854	-9	0	0	0	-9
19	328.39	20,854	0	0	0	0	0
20	328.36	20,839	-15	0	0	0	-15
21	328.33	20,825	-14	0	0	0	-14
22	328.31	20,816	-9	0	0	0	-9
23	328.30	20,811	-5	0	0	0	-5
24	328.29	20,806	-5	0	0	0	-5
25	328.28	20,802	-4	0	0	0	-4
26	328.25	20,787	-15	0	0	0	-15
27	328.25	20,787	0	0	0	0	0
28	328.25	20,787	0	0	0	0	0
29	328.22	20,773	-14	0	0	0	-14
30	328.23	20,778	5	3	0	0	-1
Total			-227		3	0	0
Mean cfs-days			---		0	0	---
Acre-feet			-227		6	0	0
							-233

Table 18. Consolidated State-Federal Little Panoche Reservoir

Daily Operations

September 1998

United States

Department of the Interior

Bureau of Reclamation

Central Valley Project

Capacity: 5,580 ac-ft

State of California

The Resources Agency

Department of Water Resources

State Water Project

Date	Water Surface Elev. (in feet)	Storage (ac-ft) 1/	Storage Change (ac-ft) 1/	Computed Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft) 1/
					Spill	Outlet	
Aug 31	602.70	832					
1	602.70	832	0	5	0	5	0
2	Not Observed			5	0	5	
3	Not Observed			5	0	5	
4	602.70	832	0	5	0	5	0
5	Not Observed			5	0	5	
6	Not Observed			5	0	5	
7	Not Observed			5	0	5	
8	Not Observed			5	0	5	
9	Not Observed			5	0	5	
10	Not Observed			5	0	5	
11	602.70	832	0	5	0	5	0
12	Not Observed			5	0	5	
13	Not Observed			5	0	5	
14	Not Observed			5	0	5	
15	Not Observed			5	0	5	
16	Not Observed			5	0	5	
17	Not Observed			5	0	5	
18	602.70	832	0	5	0	5	0
19	Not Observed			5	0	5	
20	Not Observed			5	0	5	
21	Not Observed			5	0	5	
22	Not Observed			5	0	5	
23	Not Observed			5	0	5	
24	Not Observed			5	0	5	
25	602.70	832	0	5	0	5	0
26	Not Observed			5	0	5	
27	Not Observed			5	0	5	
28	Not Observed			5	0	5	
29	Not Observed			5	0	5	
30	602.70	832	0	5	0	5	0
Total			0	150	0	150	---
Mean cfs			---	5	0	5	---
ac-ft			0	298	0	298	0

1/ Not available on a daily basis

Table 19a. Governor Edmund G. Brown California Aqueduct

San Luis Field Division, Monthly Deliveries

(In acre-feet)

September 1998

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries					
	Beginning and Ending					USBR	Transfer	DWR	USBR		
	No.	Structure	Mile					Recreation	Recreation		
2B	12	Check No. 12	66.71		251,878						
3	13	O'Neill Forebay		Department of Parks and Recreation	23			13	10		
		Outlet Check No. 13	70.85	Department of Fish & Game	0			0	0		
		Thru	70.91			1,294	1,294				
				San Luis Water District	1,294						
			85.08	(Floodwater Inflow)	0						
				Reach 3 Subtotal:	1,317	1,294	0	13	10		
		Dos Amigos Pumping Plant	86.73		260,581						
4	14	Thru	89.03			3,338	219				
			94.06	San Luis Water District	3,338						
			89.66								
			89.67	Pacheco Water District	219						
			89.68								
			89.70	Panoche Water District	3						
		Check No. 14	95.06	City of Dos Palos	122	122	272				
		Thru	98.15	San Luis Water District	272						
			104.20								
			96.15			2,272	0				
			Thru	Panoche Water District	2,272						
			102.64	(Floodwater Inflow)	0						
		Thru	102.64	Broadview Water District	2	3,920	2				
			105.22								
			Thru	Westlands Water District	3,920						
			108.64								
		Check No.15	108.50								
				Pacheco Water District Total:	219	219	0	0	0		
				Broadview Water District Total:	2	2	0	0	0		
				City of Dos Palos Total:	122	122	0	0	0		
				SLWD Reach 4 Subtotal:	3,610	3,610	0	0	0		
				Panoche Water District Total:	2,275	2,275	0	0	0		
				SLWD Total:	4,904	4,904	0	0	0		
				Westlands WD Reach 4 Subtotal:	3,920	3,920	0	0	0		

Table 19b. Governor Edmund G. Brown California Aqueduct

San Luis Field Division, Monthly Deliveries (Continued)

(In acre-feet)

September 1998

Reach No.	Operating Pool			Turnout	Total Diver- sions	Deliveries						
	Beginning and Ending					USBR	Transfer	DWR	USBR			
	No.	Structure	Mile					Recreation	Recreation			
5	16		110.52	(Reverse flow, Kings River)	0	10,780		1				
			Thru	Westlands Water District	10,780							
			122.05	Department of Fish and Game	1							
		Check No. 16	122.07									
	17		124.18	Westlands Water District	6,522	6,522		1				
			132.74									
		Check No. 17	132.95									
	18		133.81	Westlands Water District	8,407	8,407		1				
			Thru									
			142.61									
		Pleasant Valley Pumping Plant	143.16	Westlands Water District	8,622	8,622		1				
			143.16	City of Coalinga	551		551					
		Check No. 18	143.23									
				Westlands WD Reach 5 Subtotal:	34,331	34,331	0	0	0			
6	19		145.26	Westlands Water District	12,965	12,965		1				
			Thru									
			151.19									
		Check No. 19	155.64									
				Westlands WD Reach 6 Subtotal:	12,965	12,965	0	0	0			
7	20		156.34	City of Huron	97	97		1				
			156.40	Westlands Water District	5,573		5,573					
			Thru									
			163.69									
		Check No. 20	164.69									
	21		164.79	City of Avenal	188	188		1				
			167.04	Westlands Water District	2,557		2,557					
			Thru									
			171.67									
		Check No. 21	172.40		195,386							
				Reach 7 Total:	8,415	8,415	0	0	0			
				Westlands WD Total:	59,346	59,346	0	0	0			
				City of Coalinga Total:	551	551	0	0	0			
				City of Huron Total:	97	97	0	0	0			
				City of Avenal Total:	188	188	0	0	0			
				Phase I Water Total:	0	0	0	0	0			
				Total San Luis Field Division Deliveries:	67,728	67,704	0	13	11			

Table 20. Consolidated State-Federal San Luis Canal 1/

Daily Operations
September 1998

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

State of California
The Resources Agency
Department of Water Resources
State Water Project

Date	Storage In Canal (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)		Outflow (cfs) 5/				Computed Losses (-) Gains (+) (cfs)
			Non- Project 2/	Dos Amigos Pumping Plant	San Luis Water Dist. 3/	Panoche Water District	Westlands Water Dist. 4/	Flow Past Check 21	
Aug 31	29,063								
1	29,508	445	0	7,315	118	96	2,071	4,757	-49
2	29,228	-280	0	7,229	117	96	2,066	5,132	41
3	29,377	149	0	7,236	107	95	2,191	4,999	231
4	29,853	476	0	7,430	107	95	1,835	5,126	-27
5	30,371	518	0	6,672	105	89	1,633	4,692	108
6	30,097	-274	0	4,899	100	57	1,489	3,637	246
7	29,423	-674	0	4,681	99	57	830	3,938	-97
8	30,283	860	0	6,005	88	58	1,180	4,217	-28
9	29,944	-339	0	5,033	81	58	951	4,091	-23
10	29,978	34	0	4,757	70	42	1,010	3,674	56
11	29,209	-769	0	4,049	75	43	747	3,453	-119
12	28,896	-313	0	3,985	56	44	861	3,166	-16
13	29,885	989	0	4,346	46	44	647	2,812	-298
14	29,834	-51	0	3,727	47	30	601	2,833	-242
15	29,023	-811	0	3,208	52	30	736	2,692	-107
16	28,866	-157	0	2,924	57	30	710	2,002	-204
17	28,990	124	0	3,553	47	9	780	2,547	-107
18	28,944	-46	0	3,580	45	9	729	2,677	-143
19	27,949	-995	0	3,064	51	6	739	2,711	-59
20	29,335	1,386	0	3,793	51	6	639	2,239	-159
21	29,154	-181	0	3,220	51	8	769	2,626	143
22	28,767	-387	0	3,330	50	19	695	2,822	61
23	28,128	-639	0	3,180	50	19	530	2,768	-135
24	27,482	-646	0	3,200	54	13	718	2,664	-77
25	28,912	1,430	0	4,828	53	19	773	3,157	-105
26	28,677	-235	0	3,128	43	15	885	2,524	221
27	28,572	-105	0	3,119	43	15	885	2,487	258
28	28,803	231	0	2,973	43	15	885	2,336	422
29	28,237	-566	0	3,199	43	15	885	2,864	323
30	28,729	492	0	3,712	43	15	885	2,860	339
Total		-334	0	131,375	1,992	1,147	30,355	98,503	454
Mean (cfs)		---	0	4,445	68	40	1,021	3,314	15
Acre-feet		-334	0	260,581	3,951	2,275	60,210	195,386	907

1/ San Luis Canal includes Pools 14 through 21 of the California Aqueduct.

2/ Pump In of Non-Project Water (0 AF @ Lat.7L) and Flood Water (0 AF) is included in the gain or loss.

3/ Includes 218 AF AG & 1 AF M&I to Pacheco W.D. and 122 AF to the City of Dos Palos.

4/ Includes 97 AF to the City of Huron, 188 AF to the City of Avenal, 551 AF to the City of Coalinga, 25 AF Phase I Water @ Lat 21R = 16 AF & Lat. 13R = 9 AF, and 2 AF to Broadview W.D.

5/ USBR Water Year Ended 9/25/98. Totals represented daily from 9/26 to 9/30 are an average use estimated to correlate with actual charge thru 9/25/98. SJFD not affected by USBR close out.

Table 21. San Joaquin Field Division Plant Data

(in acre-feet)

September 1998

Date	Coastal Aqueduct					California Aqueduct			
	Las Perillas Pumping Plant	Badger Hill Pumping Plant	Devil's Den Pumping Plant	Bluestone Pumping Plant	Polonio Pass Pumping Plant	Buena Vista Pumping Plant	Teerink Pumping Plant	Chrisman Pumping Plant	Edmonston Pumping Plant
1	650	677	99	100	101	3,985	3,211	2,896	2,777
2	637	652	75	78	79	3,845	3,053	2,862	2,850
3	594	631	101	101	101	3,606	3,019	2,833	2,713
4	545	560	76	79	86	3,954	3,359	3,131	2,933
5	566	599	105	105	105	3,230	2,926	2,849	2,721
6	494	525	67	68	71	2,824	2,542	2,472	2,452
7	525	531	58	61	67	3,194	3,022	2,809	2,482
8	489	497	85	87	70	3,196	2,782	2,660	2,572
9	500	518	76	76	77	3,524	3,078	2,924	2,820
10	391	423	87	87	87	3,265	3,109	2,974	2,856
11	380	407	75	78	80	2,839	2,660	2,509	2,411
12	394	437	89	91	93	3,103	2,479	2,425	2,272
13	313	343	71	72	73	2,618	2,626	2,527	2,516
14	387	416	91	91	93	2,387	2,292	2,138	1,985
15	426	465	86	90	90	2,120	1,980	1,770	1,794
16	366	399	66	66	66	2,233	1,909	1,780	1,696
17	397	431	68	70	73	2,438	2,231	2,078	2,067
18	500	555	91	91	91	2,398	2,294	2,009	1,988
19	449	498	91	91	94	2,154	1,962	1,919	1,885
20	431	470	91	91	94	2,074	1,735	1,646	1,500
21	474	513	89	91	91	2,231	2,130	1,995	2,043
22	417	460	76	78	80	2,722	2,480	2,360	2,291
23	447	487	74	74	75	2,700	2,664	2,489	2,403
24	404	435	82	84	86	2,358	2,379	2,242	2,196
25	386	402	85	85	85	2,591	2,275	2,168	2,095
26	319	343	67	67	68	2,304	2,025	1,951	1,852
27	313	343	89	89	93	2,029	1,747	1,713	1,639
28	323	323	91	91	93	2,342	2,259	2,189	2,253
29	244	244	88	88	91	2,759	2,722	2,628	2,602
30	205	205	65	66	68	2,667	2,631	2,507	2,318
Total	12,966	13,789	2,454	2,486	2,521	83,690	75,581	71,453	68,982

Table 22a. Governor Edmund G. Brown California Aqueduct
 San Joaquin Field Division, Monthly Deliveries

(In acre-feet)

September 1998

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries							
	Beginning and Ending					Entitle-ment	MWD Ent.	Purchase Pool A	Purchase Pool B	USBR Recreation			
	No.	Structure	Mile										
7	21	Check No. 21	172.40		195,386								
8C	22		172.66	Empire West Side Irrig. Dist.		0	458	1,300	1,000				
				TL - A	0								
				County of Kings									
				TL - A	0								
				TLBWSD TL-A	458								
				175.18 DRWD - 1	761								
8D				177.54 DRWD - 1B	416	416	360	1,420	1,000				
				180.64 TLBWSD - C	0								
				180.65 DRWD - 1A	360								
				182.99 DRWD - 2	3,720								
				183.00 Tulare Lake Basin WSD	1,610								
				TL - B									
31A				184.63 Coastal Branch	12,966	1,208	4,165	0	1,300	1,000			
8D				Dudley Ridge Water Dist.									
				184.78 DRWD - 3	1,208								
				Dudley Ridge Reach 8D Total:	6,465								
				Tulare Lake Basin WSD Total:	2,068								
				Check No. 22	184.82								
				Kern County Water Agency		3,749	808	0	0	0			
9	23		189.69	Lost Hills Water Dist. - 1	3,749								
				191.18 Lost Hills Water Dist. - 2	808								
				194.22 Lost Hills Water Dist. - 3	769								
				196.40 Berrenda Mesa - 2	0								
				196.75 Lost Hills Water Dist. - 4	658								
				K.C.W.A. Reach 9 Subtotal:	5,984								
10A	24		197.05			5,984	0	0	0	0			
				Kern County Water Agency									
				201.24 Lost Hills Water Dist. - 7	888								
				202.05 Lost Hills Water Dist. - 5	2,330								
				204.69 Lost Hills Water Dist. - 6	0								
				205.26 Lost Hills Water Dist. - 8	0								
	25		207.94			1,558	11,641	0	0	3,077			
				Kern County Water Agency									
				209.71 Belridge Water Storage Dist. - 1A	1,558								
				209.78 Kern National Wildlife Refuge									
				USBR BV-1B	3,077								
				Kern County Water Agency									
			209.80	Buena Vista WSD 1B	0	14,896	31,313	0	0	0			
				KCWA Semitropic WSD	11,641								
				KCWA Semitropic WSD Penstocks	14,896								
				USBR Total:	3,077								
				K.C.W.A. Reach 10A Subtotal:	31,313								

Table 22b. Governor Edmund G. Brown California Aqueduct
 San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

September 1998

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries						
	Beginning and Ending					Entitle-ment	MWD Ent. 1/	Purchase Pool A	MWD Ent. Exch. 2/	USBR Recreation		
	No.	Structure	Mile									
11B	25		Kern County Water Agency Belridge - 2	0	937	937	6,264	83	0			
			Kern County Water Agency Belridge - 3	937								
			Kern County Water Agency Belridge - 4	0								
			Kern County Water Agency Belridge - 5	6,264								
			Kern County Water Agency Belridge - 5D	83								
			Check No. 25	217.79								
			K.C.W.A. Reach 11B Subtotal:	7,284								
12D	26		Kern County Water Agency Belridge - 6	0	488	488	13,461	7,019	56			
			Check No. 26	224.92								
12E	27		Kern County Water Agency Buena Vista - 6	488	488	4,055	13,461	7,019	56			
			Check No. 27	231.73								
	28		Kern County Water Agency Buena Vista - 2	4,055	4,055	13,461	7,019	56				
			Kern County WA CVC	20,480								
			DRWD CVC	56								
			Tulare Co.	0								
			Lower Tule River	0								
			Fresno Co.	0								
			Pixley ID	0								
			Hacienda DWR Wells	0								
			Check No. 28	238.11								
			1/ Arvin Edison Total:	0								
			Reach 12E Subtotal:	25,023	18,004	7,019	0	56	0			
13B	29		241.02 Kern River Intertie (inflow)	0	4,864	5,500	1,602	491				
			KCWA Buena Vista WSD - 7	10,364								
			242.85 KCWA Buena Vista WSD - 5	0								
			Kern County Water Agency Buena Vista - 3	1,602								
			Check No. 29	244.54 Buena Vista WSD								
	30		249.85 Kern County Water Agency Buena Vista - 4	491	491							
			Buena Vista Pumping Plant	250.99								
			K.C.W.A. Reach 13B Subtotal:	12,457	6,957	5,500	0	0	0			
14A	31		254.47 Kern County Water Agency West Kern - 2	0	151							
			256.11 Kern County Water Agency Wheeler Ridge-Maricopa - 2	151								

1/ Arvin-Edison WSD is storing this water for MWD.

2/ There were 56 AF of Dudley Ridge Water District's Ag entitlement delivered to the Kern Water Bank.

Table 22c. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

September 1998

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries					
	Beginning and Ending		Structure			Entitle-ment 1/	MWD Ent.	Inter-ruptible Ent.	Exchange	MWD Ent.	
	No.	Structure	Mile								
14A	31	Check No. 31	256.14			571					
	32		258.61	Kern County Water Agency Wheeler Ridge-Maricopa - 3	571						
			260.44	Kern County Water Agency Wheeler Ridge-Maricopa - 4	1,021						
		Check No. 32	261.72								
				KCWA Reach 14A Subtotal:	1,743		1,743	0	0	0	
14B	33		264.42	Kern County Water Agency Wheeler Ridge-Maricopa - 5	3,602	3,602					
			266.91	Kern County Water Agency Wheeler Ridge-Maricopa - 6	447		447				
		Check No. 33	267.36								
	34		270.24	Kern County Water Agency Wheeler Ridge-Maricopa - 7	3,100		3,100				
		Check No. 34	271.27								
				Reach 14B Total:	7,149		7,149	0	0	0	
14C	35		272.39	Kern County Water Agency Wheeler Ridge-Maricopa - 8	1,611	1,611					
			276.09	Kern County Water Agency Wheeler Ridge-Maricopa - 9	708		708				
				Reach 14C Total:	2,319						
					2,319		2,319	0	0	0	
15A	36	Teerink Pumping Plant	278.13		75,581	403					
			279.02	Kern County Water Agency Wheeler Ridge-Maricopa - 9A	403						
			280.06	Kern County Water Agency Wheeler Ridge-Maricopa - 10	2,144		2,144				
				Reach 15-A Total:	2,547			2,547	0	0	
		Chrisman Pumping Plant	280.36		71,453						
16A	37		282.06	Kern County Water Agency Wheeler Ridge-Maricopa - 11	0	18					
			283.95								
			285.01	Kern County Water Agency Wheeler Ridge-Maricopa - 12	18		64				
			286.39	Kern County Water Agency Wheeler Ridge-Maricopa - 13A	64						
			287.06	Kern County Water Agency Wheeler Ridge-Maricopa - 13	0						
		Check No. 38	287.09								
	39		287.62	Kern County Water Agency Wheeler Ridge-Maricopa - 13B	221	221					
		Check No. 39	290.21								
	40		291.26	Kern County Water Agency Wheeler Ridge-Maricopa - 14	642		642				
			293.07	Kern County Water Agency Wheeler Ridge-Maricopa - 15	148			148			
				Kern County Water Agency Tehachapi Cummings CWD	1,203						
				K.C.W.A. Reach 16A Subtotal:	2,296		1,203	2,296	0	0	
17E		Edmonston Pumping Plant	293.45		68,982						

Table 23. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Coastal Branch)

(In acre-feet)

September 1998

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries						
	Beginning and Ending					Entitle-ment	MWD Ent. 1/	Inter-ruptible Ent.	Exchange			
	No.	Structure	Mile							Purchase Pool B		
31A	C-1	Coastal Branch Control	0.02		12,966	621	621	0	0	0		
		Las Perillas Pumping Plant	1.16		12,966							
	C-2		3.79	Green Valley Water District	0							
		Badger Hill Pumping Plant	4.27		13,789							
	C-3	Coastal Check No. 3	7.21									
	C-4		9.34	Castaic Lake WA (Devil's Den WD #1)	0							
		Coastal Check No. 4	9.34									
	C-5	Coastal Check No. 5	12.20									
	C-6		13.30	Kern County Water Agency Berrenda Mesa - 3	621							
			14.83	Kern County Water Agency Berrenda Mesa - DD	0							
				Kern County Water Agency Berrenda Mesa - PO	9,309							
	Devil's Den Pumping Plant	14.86			2,454							
				K.C.W.A. Reach 31A Subtotal:	9,930	9,930	0	0	0	0		
				K.C.W.A. Total:	108,045	95,526	12,519	0	0	0		
33A	C-7	Bluestone Pumping Plant	19.05		2,486	2,161	364	0	0	0		
	C-8	Polonio Pass Pumping Plant	26.54		2,521							
	C-9	Tank Site 1	27.81	(CCWA) Polonio Pass Treatment Plant								
	C-10	Shandon T.O.	38.23	Santa Barbara County (CCWA)	2,161							
		Tank Site 2	58.63	Central Coast:	0							
34	C-11	Chorro Valley T.O.	69.31	San Luis Obispo County (CCWA)	364	2,525	0	0	0	0		
		Energy Dissipater	78.12									
35	C-12	Lopez T.O.	85.86	SLOCFC & WCD	0	2,525	0	0	0	0		
				CCWA Total:	2,525							
		Guadalupe T.O.	102.70	SBCFC & WCD	0							
		Santa Maria T.O.	107.43	SBCFC & WCD	0							
38		So. Cal. Water T.O.	109.20	SBCFC & WCD	0	0	0	0	0	0		
				SBCFC & WCD Total:	0							
		Tank Site 5	115.42									

1/ Arvin-Edison WSD is storing this water for MWD.

Table 24. Southern Field Division Plant Data

(in acre-feet)

September 1998

Date	West Branch				East Branch						
	Oso Pumping Plant	Warne Powerplant Generation	Castaic Powerplant		Alamo Powerplant			Pearblossom Pumping Plant	Mojave Siphon Powerplant		Devil Canyon Powerplant Generation
			Generation	Pumpback	Generation	Bypass Through Plant	Cottonwood Chute		Generation	Bypass Flume	
1	1,011	1,186	10,688	6,738	1,891	0	0	1,229	1,770	0	1,621
2	658	953	7,290	7,120	1,976	0	23	1,716	1,878	0	1,876
3	593	663	7,390	3,718	2,097	0	41	1,889	1,622	44	1,832
4	880	648	633	7,084	2,034	0	0	1,391	1,056	124	1,686
5	1,063	691	663	1,009	1,600	0	0	1,606	1,592	61	973
6	550	186	1,577	1,005	1,861	0	0	1,605	1,463	40	896
7	784	1,528	2,870	3,970	1,901	0	62	1,785	2,094	0	1,745
8	554	685	2,184	2,772	1,945	0	0	1,925	1,840	62	1,545
9	679	713	3,116	625	2,149	0	0	1,840	1,855	100	1,639
10	855	528	3,427	2,024	1,905	0	0	1,952	2,196	0	1,459
11	538	532	3,274	1,948	1,841	0	8	1,649	1,411	0	1,320
12	757	527	3,646	2,817	1,466	0	0	1,276	1,073	193	886
13	531	0	1,809	3,248	1,933	0	0	1,345	1,499	0	558
14	464	530	4,060	1,932	1,465	0	45	969	779	0	1,521
15	431	528	4,312	2,846	1,336	0	0	1,239	1,063	48	1,267
16	644	529	3,454	2,769	1,033	0	0	689	911	121	1,023
17	646	647	4,736	2,913	1,343	0	0	1,083	1,332	213	1,187
18	582	725	5,259	2,738	1,320	0	0	1,063	0	4	1,045
19	429	674	685	1,966	1,399	0	0	869	1,296	0	828
20	10	115	1,041	4,010	1,432	0	12	883	935	0	661
21	626	676	3,586	2,984	1,383	0	0	1,234	1,273	10	1,458
22	625	671	5,095	3,138	1,579	0	0	1,350	1,022	58	754
23	806	707	3,038	1,901	1,493	0	0	1,195	1,409	0	1,268
24	601	701	4,893	2,838	1,568	0	0	1,302	1,166	96	1,674
25	637	697	3,171	2,315	1,375	0	0	997	1,320	34	1,140
26	748	694	1,355	2,859	1,096	0	0	770	747	62	397
27	437	0	1,886	3,817	1,081	0	0	650	367	111	611
28	680	697	5,415	3,366	1,535	0	0	1,184	741	238	1,504
29	677	672	5,337	3,164	1,877	0	0	1,660	1,715	0	1,800
30	698	695	5,002	3,450	1,358	0	0	1,247	1,192	375	1,354
Total	19,194	18,798	110,892	93,084	48,272	0	191	39,592	38,617	1,994	37,528

Table 25. Pyramid Lake

Daily Operation

Capacity: 171,200 ac-ft

(in acre-feet except as noted)

September 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow			Outflow			Computed Losses (-) Gains (+)
				Project		Natural	Project		Natural	
				Castaic Powerplant Pumpback	Warne Powerplant	Stream Flow	Castaic Powerplant Generation	Recreation Deliveries	To Piru Creek	
Aug 31	2570.86	160,847								
1	2567.30	156,452	-4,395	6,738	1,186	47	10,688	0	50	-1,628
2	2569.61	159,295	2,843	7,120	953	45	7,290	0	50	2,065
3	2565.40	154,139	-5,156	3,718	663	48	7,390	0	52	-2,143
4	2570.77	160,735	6,596	7,084	648	64	633	0	52	-515
5	2572.03	162,308	1,573	1,009	691	71	663	0	54	519
6	2571.82	162,045	-263	1,005	186	55	1,577	0	54	122
7	2573.97	164,750	2,705	3,970	1,528	50	2,870	0	54	81
8	2574.98	166,031	1,281	2,772	685	49	2,184	0	56	15
9	2573.60	164,283	-1,748	625	713	47	3,116	0	56	39
10	2573.01	163,539	-744	2,024	528	45	3,427	0	58	144
11	2572.38	162,747	-792	1,948	532	45	3,274	0	59	16
12	2572.26	162,596	-151	2,817	527	45	3,646	0	59	165
13	2573.52	164,182	1,586	3,248	0	45	1,809	0	59	161
14	2572.23	162,559	-1,623	1,932	530	45	4,060	0	59	-11
15	2571.39	161,508	-1,051	2,846	528	42	4,312	0	59	-96
16	2571.47	161,608	100	2,769	529	42	3,454	0	59	273
17	2570.46	160,349	-1,259	2,913	647	42	4,736	0	59	-66
18	2569.05	158,603	-1,746	2,738	725	42	5,259	0	59	67
19	2570.62	160,548	1,945	1,966	674	42	685	0	59	7
20	2573.09	163,640	3,092	4,010	115	45	1,041	0	59	22
21	2573.17	163,740	100	2,984	676	46	3,586	0	59	39
22	2572.23	162,559	-1,181	3,138	671	47	5,095	0	59	117
23	2571.49	161,633	-926	1,901	707	47	3,038	0	59	-484
24	2570.37	160,237	-1,396	2,838	701	47	4,893	0	60	-29
25	2570.33	160,188	-49	2,315	697	47	3,171	0	60	123
26	2572.17	162,484	2,296	2,859	694	48	1,355	0	60	110
27	2573.77	164,498	2,014	3,817	0	50	1,886	0	60	93
28	2572.70	163,149	-1,349	3,366	697	50	5,415	0	60	13
29	2571.50	161,645	-1,504	3,164	672	54	5,337	0	69	12
30	2570.79	160,760	-885	3,450	695	53	5,002	0	77	-4
Total				-87	93,084	18,798	1,445	110,892	0	1,749
										-773

Table 26. Elderberry Forebay

Daily Operation

(in acre-feet except as noted)

Capacity: 32,746 ac-ft

September 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow			Computed Losses (-) Gains (+)	
				Castaic Powerplant Generation	Natural	Castaic Powerplant Pumpback	To Castaic Lake			
							Natural	Project		
Aug 31	1523.02	24,544								
1	1527.43	26,504	1,960	10,688	3	6,738	3	1,990	0	
2	1528.52	27,000	496	7,290	7	7,120	7	0	326	
3	1531.72	28,483	1,483	7,390	12	3,718	12	2,149	-40	
4	1517.00	21,980	-6,503	633	11	7,084	11	0	-52	
5	1515.95	21,548	-432	663	12	1,009	12	0	-86	
6	1517.10	22,021	473	1,577	11	1,005	11	0	-99	
7	1514.15	20,817	-1,204	2,870	10	3,970	10	0	-104	
8	1512.54	20,175	-642	2,184	9	2,772	9	0	-54	
9	1513.94	20,732	557	3,116	9	625	9	1,908	-26	
10	1516.89	21,934	1,202	3,427	9	2,024	9	0	-201	
11	1513.14	20,413	-1,521	3,274	8	1,948	8	2,818	-29	
12	1514.67	21,026	613	3,646	7	2,817	7	0	-216	
13	1510.76	19,478	-1,548	1,809	7	3,248	7	0	-109	
14	1515.96	21,552	2,074	4,060	6	1,932	6	0	-54	
15	1519.51	23,032	1,480	4,312	6	2,846	6	0	14	
16	1515.70	21,445	-1,587	3,454	6	2,769	6	2,272	0	
17	1516.16	21,634	189	4,736	6	2,913	6	1,605	-29	
18	1521.79	24,009	2,375	5,259	6	2,738	6	0	-146	
19	1518.58	22,639	-1,370	685	5	1,966	5	0	-89	
20	1511.21	19,653	-2,986	1,041	5	4,010	5	0	-17	
21	1512.49	20,155	502	3,586	7	2,984	7	0	-100	
22	1517.01	21,984	1,829	5,095	9	3,138	9	0	-128	
23	1516.78	21,889	-95	3,038	9	1,901	9	1,756	524	
24	1521.75	23,992	2,103	4,893	9	2,838	9	0	48	
25	1523.18	24,614	622	3,171	9	2,315	9	0	-234	
26	1519.36	22,969	-1,645	1,355	9	2,859	9	0	-141	
27	1514.47	20,946	-2,023	1,886	10	3,817	10	0	-92	
28	1514.05	20,777	-169	5,415	10	3,366	10	2,187	-31	
29	1519.13	22,871	2,094	5,337	9	3,164	9	0	-79	
30	1515.78	21,478	-1,393	5,002	9	3,450	9	2,933	-12	
Total				-3,066	110,892	245	93,084	245	19,618	-1,256

Table 27. Castaic Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 323,699 ac-ft

September 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow			Outflow		Computed Losses (-) Gains (+)	
				From Elderberry Forebay		Natural	Deliveries	Released To Castaic Lagoon		
				Natural	Project					
Aug 31	1507.10	306,323								
1	1507.90	308,057	1,734	3	1,997	7	1,048	26	801	
2	1507.30	306,756	-1,301	7	0	15	1,203	26	-94	
3	1508.00	308,274	1,518	12	2,186	13	1,068	26	401	
4	1507.52	307,233	-1,041	11	0	14	824	26	-216	
5	1507.27	306,691	-542	12	0	17	458	26	-87	
6	1507.07	306,258	-433	11	0	15	370	26	-63	
7	1506.76	305,588	-670	10	0	12	546	26	-120	
8	1506.41	304,832	-756	9	0	10	645	26	-104	
9	1507.06	306,237	1,405	9	1,873	10	532	26	71	
10	1507.00	306,107	-130	9	0	11	527	26	403	
11	1507.90	308,057	1,950	8	2,809	10	582	26	-269	
12	1507.20	306,540	-1,517	7	0	9	626	26	-881	
13	1507.00	306,107	-433	7	0	9	632	26	209	
14	1507.00	306,107	0	6	0	9	594	26	605	
15	1506.72	305,502	-605	6	0	8	626	26	33	
16	1507.30	306,756	1,254	6	2,272	8	613	26	-393	
17	1508.00	308,274	1,518	6	1,637	8	562	26	455	
18	1507.55	307,298	-976	6	0	8	540	26	-424	
19	1507.40	306,973	-325	5	0	7	554	26	243	
20	1507.00	306,107	-866	5	0	8	486	25	-368	
21	1506.80	305,675	-432	7	0	14	489	23	59	
22	1506.80	305,675	0	9	0	15	486	23	485	
23	1507.15	306,432	757	9	1,733	15	474	23	-503	
24	1506.70	305,459	-973	9	0	15	435	23	-539	
25	1506.53	305,091	-368	9	0	15	365	23	-4	
26	1506.33	304,660	-431	9	0	15	449	0	-6	
27	1506.15	304,272	-388	10	0	17	492	0	77	
28	1506.85	305,783	1,511	10	2,178	16	523	0	-170	
29	1506.66	305,372	-411	9	0	14	551	0	117	
30	1506.85	305,783	411	9	2,933	14	424	0	-2,121	
Total			-540	245	19,618	358	17,724	634	-2,403	

Table 28. Governor Edmund G. Brown California Aqueduct

Southern Field Division, Monthly Deliveries (West Branch)

(In acre-feet)

September 1998

Reach	Operating Pool			Turnout	Total Diver-sions	Deliveries						
	Beginning and Ending		Structure			Entitle-ment	Rec.	Local	Purchase Pool B	CLWA T1	14 B M & I	
	No.	No.	Mile									
29A	42	Oso Pumping Plant	1.49		19,194							
29F	W2	Quail Lake	5.02	Antelope Valley-East Kern Water Agency	Re-moved							
		Quail Lake Embankment	7.82	Antelope Valley-East Kern Water Agency	Stub							
		Warne Power Plant	14.07		18,798							
29H	W3	Pyramid Lake		Calif. State Park Pyramid Recreation	0							
		Pyramid Dam	17.10	Piru Creek Fish Enhancement	0							
29J	W4	Castaic Power Plant	25.82	(93,084 AF pumpback)	110,892							
		Elderberry Forebay										
		Forebay Dam	28.12									
30 1/	W5	Castaic Lake		Calif. State Park Castaic Lake Recreation	34		34					
		Dam	31.47									
		Castaic Lake Outlet	31.55	MWD - 78"	12,319							
				MWD - 132"	4,347	7,139						
				CLWA - T1	-1,265	3,082						
				Castaic Lake Water Agency	1,024	1,024						
				United Water Conservation Dist.	0							
				Ventura County FCD	Stub							
				LA Co. Parks & Recreation	0							
				Releases to Lagoon	634							
				Reach 30 Subtotal:	16,459	11,245	34	0	0		5,180	
	W6	Castaic Lagoon		Recreation to Lagoon	102		102					
		Outlet	31.87		619							

1/ Reach 30 actually terminates at mile 31.50. It is shown here as including the outlet works at mile 31.55.

All deliveries from the outlet works and from the Lagoon are billed to Reach 30.

Table 29. Silverwood Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 74,970 ac-ft

September 1998

Date	Water Surface Elev. (in feet)	Storage	Storage Change	Inflow			Outflow				Del. To Mojave W.A.	Natural To Mojave River	Computed Losses (-) Gains (+)	Las Flores Ranch Exchange 1/
				Mojave Siphon Power-plant	Mojave Bypass Flume	Natural Stream Inflow	Project		San Bernardino Tunnel					
				Delivered to CLAWA	Rec.	San Bernardino Tunnel								
Aug 31	3349.15	69,379												
1	3349.36	69,575	196	1,770	0	4	1	0	1,621	0	0	44	39	
2	3349.29	69,510	-65	1,878	0	3	6	0	1,876	0	1	-63	39	
3	3349.14	69,369	-141	1,622	44	3	6	0	1,832	0	0	28	39	
4	3348.52	68,791	-578	1,056	124	3	6	1	1,686	0	1	-67	39	
5	3349.24	69,463	672	1,592	61	4	7	0	973	0	0	-5	39	
6	3349.80	69,988	525	1,463	40	3	6	0	896	0	1	-78	39	
7	3350.17	70,337	349	2,094	0	3	3	0	1,745	0	0	0	39	
8	3350.53	70,676	339	1,840	62	2	3	0	1,545	0	0	-17	39	
9	3350.80	70,932	256	1,855	100	2	3	0	1,639	0	0	-59	39	
10	3351.62	71,710	778	2,196	0	2	3	0	1,459	0	0	42	39	
11	3351.79	71,873	163	1,411	0	2	1	0	1,320	0	0	71	39	
12	3351.99	72,063	190	1,073	193	2	0	0	886	0	1	-191	39	
13	3352.95	72,983	920	1,499	0	2	1	0	558	0	0	-22	39	
14	3352.22	72,283	-700	779	0	2	0	0	1,521	0	1	41	33	
15	3351.99	72,063	-220	1,063	48	2	1	0	1,267	0	0	-65	30	
16	3352.00	72,073	10	911	121	2	6	0	1,023	0	1	6	30	
17	3352.16	72,226	153	1,332	213	2	4	1	1,187	0	0	-202	30	
18	3351.12	71,235	-991	0	4	2	5	1	1,045	0	1	55	30	
19	3351.59	71,682	447	1,296	0	2	1	0	828	0	0	-22	30	
20	3351.82	71,901	219	935	0	2	0	0	661	0	1	-56	30	
21	3351.69	71,777	-124	1,273	10	3	0	0	1,458	0	0	48	30	
22	3352.01	72,083	306	1,022	58	3	4	1	754	0	1	-17	30	
23	3352.15	72,216	133	1,409	0	3	4	0	1,268	0	0	-7	30	
24	3351.70	71,787	-429	1,166	96	3	4	0	1,674	0	0	-16	30	
25	3351.90	71,977	190	1,320	34	3	4	1	1,140	0	0	-22	30	
26	3352.29	72,350	373	747	62	3	1	0	397	0	1	-40	30	
27	3352.06	72,130	-220	367	111	3	0	0	611	0	0	-90	30	
28	3351.34	71,444	-686	741	238	3	0	0	1,504	0	0	-164	27	
29	3351.28	71,387	-57	1,715	0	3	0	0	1,800	0	0	25	20	
30	3,351	71,264	-123	1,192	375	4	5	0	1,354	0	1	-334	20	
Total				1,885	38,617	1,994	80	85	5	37,528	0	11	-1,177	997

1/ Project water delivered from Mojave Siphon in exchange for like amount of Natural Streamflow.

Table 30. Lake Perris

Daily Operation

(in acre-feet except as noted)

Capacity: 131,452 ac-ft

September 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow 1/	Outflow 2/	Computed Losses (-) Gains (+) 1/
Aug 31	1586.80	124,101				
1	1586.80	124,101	0		12	
2	1586.80	124,101	0		12	
3	1587.00	124,556	455		11	
4	1586.80	124,101	-455		12	
5	1586.81	124,124	23		11	
6	1586.81	124,124	0		12	
7	1587.00	124,556	432		11	
8	1586.90	124,328	-228		12	
9	1586.82	124,146	-182		11	
10	1586.86	124,237	91		11	
11	1586.88	124,283	46		12	
12	1586.87	124,260	-23		11	
13	1586.86	124,237	-23		12	
14	1587.00	124,556	319		13	
15	1586.86	124,237	-319		13	
16	1586.90	124,328	91		12	
17	1586.90	124,328	0		12	
18	1587.00	124,556	228		13	
19	1587.00	124,556	0		12	
20	1587.00	124,556	0		13	
21	1586.85	124,214	-342		12	
22	1586.84	124,192	-22		13	
23	1586.90	124,328	136		13	
24	1586.90	124,328	0		12	
25	1586.90	124,328	0		12	
26	1586.87	124,260	-68		12	
27	1586.87	124,260	0		12	
28	1586.87	124,260	0		11	
29	1586.80	124,101	-159		12	
30	1586.80	124,101	0		11	
Total			0	1,733	358	-1,375

1/ Readings are not taken on a daily basis. End of month only.

2/ Includes deliveries to MWD from Reach 28J and recreation water to California State Park at Lake Perris.

Table 31a. Governor Edmund G. Brown California Aqueduct
 Southern Field Division, Monthly Deliveries (East Branch)

(In acre-feet)

September 1998

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries					
	Beginning and Ending		Structure			Entitle-ment	Rec.	Transfer 1/	Purchase Pool B	Transfer Local Out	
	No.	Structure	Mile								
17E	40	Edmonston Pumping Plant	293.45		68,982						
	41		298.65	Kern County Water Agency Tej.-Cas	Stub						
17F		Check No. 41	303.41								
18A	42	Check No. 42	304.99								
19	43	Alamo Powerplant	305.73	(Does not include 191 AF flow down Cottonwood Chute)	48,272						
			308.05	Antelope Valley-East Kern WA	132						
		Check No. 43	309.70								
	44		311.84	LADWP Connection	0						
			313.50	AVEK 245th Street West	0						
	45	Check No. 44	314.81								
	46		314.93	AVEK 235th Street West	82						
			315.57	AVEK 225th Street West	0						
	47	Check No. 45	319.74								
	48		323.19	Antelope Valley-East Kern WA Fairmont	2,648						
			323.84								
				Reach 19 Total:	2,862						
20A	49	Check No. 47	326.77								
	50		326.91	Antelope Valley-East Kern WA Willow Springs Siphon	30						
			329.65	Antelope Valley-East Kern WA 120th Street West	Removed						
		Check No. 48	330.82								
	51	Check No. 49	335.93								
20B	52		336.73	AVEK WA - Quartz Hill (Wheeled for Palmdale WD)	23						
				Antelope Valley-East Kern WA	2,731						
	53	Check No. 50	341.51								
	54	Check No. 51	342.07								
	55		342.80	Antelope Valley-East Kern WA 30th Street West	Not in Use						
21	56	Check No. 52	343.74								
			346.98	PWD Palmdale	1,588						
	57		348.14	Antelope Valley-East Kern WA Acton Treatment Plant	0						
		Check No. 53	348.17								
22A	58	Check No. 54	350.25								
	59	Check No. 55	352.70								
22B	60	Check No. 56	354.76								
	61		354.97	Littlerock Creek I.D.	48						
22B	62	Check No. 57	356.93								
	63		357.72	Antelope Valley-East Kern WA 96th Street East	91						
22B	64		359.82	Antelope Valley-East Kern WA East Side Treatment Plant	285						

1/ Mojave Water Agency transferred 137 AF of water to AVEK.

Table 31b. Governor Edmund G. Brown California Aqueduct
 Southern Field Division, Monthly Deliveries (East Branch, Continued)

(In acre-feet)

September 1998

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries					
	Beginning and Ending		Structure			Entitle-ment	Recreation	Transfer	Purchase Pool B	14 B M & I	
	No.	Structure	Mile								
22B	58	Pearblossom Pumping Plant	360.61		39,592	242					
	59	Check No. 59	366.09								
	60	Check No. 60	373.94								
	61	Check No. 61	379.00								
	62	Check No. 62	384.26								
	63	Check No. 63	389.50								
	64	Check No. 64	395.10								
	65	Check No. 65	400.32								
	66		401.10	Mojave Water Agency							
				Morongo 24" and 42"	242						
23	Check No. 66		403.41	Mojave Water Agency		997					
				Hesperia	0						
24	67	Mojave Siphon	405.48	Las Flores Ranch	997	84					
			405.65	(Does not include 1,994 AF of bypass at Mojave Flume)	38,617						
25		Silverwood Lake	407.65	Crestline Lake Arrowhead Water Agency	84		6				
				Calif. State Park							
		San Bernardino Tunnel	411.46	Silverwood Agency (Rec.)	6						
	26A	Devil Canyon Powerplant	412.73		37,528	4,000					
					0						
					37,528						
				MWD-SC Rialto	0						
				Desert Water Agency (MWD Wheeling Exchange)	8,191						
				San Gabriel Valley Water District	1,198						
				Coachella Valley WD (MWD Wheeling Exchange)	13,541						
28G	28H	Santa Ana Valley Pipeline	425.46	San Bernardino Valley Water District	452	11,000					
			433.06	MWD-SC Box Springs	5,203						
			440.05	MWD-SC Perris Bypass Pipeline	7,256						
			442.00	MWD-SC 18"	312						
			443.44	MWD-SC 54"	0						
	28J	Lake Perris		MWD-SC 78"	0						
				Calif. State Park							
				Lake Perris Recreation	46						
				MWD Total:	49,904						
					29,724		0	0	15,000	5,180	

Table 32. Water Quality At Selected SWP Locations

September 1998

Constituent	Units	Thermalito Afterbay At Outlet	North Bay Aqueduct Barker Slough Pumping Plant	Banks Pumping Plant	Delta Mendota Canal At McCabe Rd.	California Aqueduct				Devil Canyon Afterbay Near San Bernardino
						O'Neill Forebay Outlet (Check 13)	Kettleman City (Check 21)	Near Hwy 119 (Check 29)	Tehachapi Afterbay (Check 41)	
Alkalinity	mg/l	36	104	60	57	57	65	69	65	65
Arsenic	mg/l	<0.001	0.003	0.002	0.002	0.002	0.002	0.002	0.003	0.002
Boron	mg/l	<.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1
Bromide	mg/l	NR	0.04	0.06	0.09	0.08	NR	NR	0.11	0.12
Calcium	mg/l	8	17	14	18	15	18	18	17	17
Carbon - Total Organic	mg/l	NR	4	3	3	3	3	NR	3	3
Chloride	mg/l	1	15	20	33	26	42	46	37	41
Chromium	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	mg/l	<0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Fluoride	mg/l	<.1	0.1	<.1	<.1	<.1	<.1	<.1	<.1	0.1
Hardness	mg/l	32	100	64	78	70	82	86	80	75
Iron	mg/l	<0.005	<0.005	0.007	0.006	0.007	<0.005	<0.005	<0.005	<0.005
Lead	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium	mg/l	3	14	7	8	8	9	10	9	8
Manganese	mg/l	<0.005	0.014	0.012	<0.005	0.008	<0.005	<0.005	<0.005	<0.005
Nitrate + Nitrite	mg/l	<0.01	0.19	0.48	NR	NR	NR	NR	0.50	0.51
Phosphorus-Ortho	mg/l	<0.01	0.10	0.07	NR	NR	NR	NR	0.10	0.10
Phosphorus-Total	mg/l	0.01	0.20	0.12	NR	NR	NR	NR	0.13	0.10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Sodium	mg/l	3	21	20	30	24	34	35	30	32
Specific Conductance	µS/cm	76	291	233	300	255	338	349	313	324
Sulfate	mg/l	2	19	21	39	25	30	30	27	28
Total Dissolved Solids	mg/l	50	176	139	177	151	188	206	198	189
Trihalomethane	µg/l	NR	529	386	369	392	NR	NR	420	439
Formation Potential	NTU	3	49	31	32	9	8	11	48	4
Turbidity	NTU	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/l									

mg/l milligrams per liter

µg/l micrograms per liter

µS/cm microSiemens per centimeter

NR - Not Reported

NTU - nephelometric turbidity units

Table 33. Water Quality At Selected Delta Stations

September 1998

Date	Tides (feet above mean sea level)		Flow In CFS		Electrical Conductivity in millSiemens/cm									Cl in mg/l	
	(Antioch) Daily Mean		Net Delta Outflow Index		Rio Vista	Antioch	Chipps Island	Emmaton		Jersey Point		Clifton Court	Cache Slough	Delta Mendota Canal	Contra Costa Canal Intake
	Mean Daily	Monthly Average	md	md				md	14dm	md	14dm				
	Hi	Half													md
1	3.21	1.54	20,423	20,423	16,035	0.15	0.33	0.14	0.14	0.10	0.10	N.R.	1.24	0.29	11
2	3.58	1.69	21,883	21,153	16,358	0.19	0.50	0.14	0.14	0.10	0.10	N.R.	1.25	0.29	12
3	3.83	1.73	20,440	20,915	16,531	0.14	0.64	0.15	0.14	0.10	0.10	N.R.	1.27	0.30	10
4	3.81	1.79	20,346	20,773	17,060	0.16	0.75	0.15	0.14	0.10	0.10	N.R.	1.27	0.30	10
5	3.80	1.62	21,308	20,880	17,700	0.16	0.68	0.15	0.15	0.10	0.10	N.R.	1.27	0.30	11
6	3.68	1.58	21,553	20,992	17,906	0.16	0.54	0.15	0.15	0.10	0.10	N.R.	1.27	0.31	10
7	3.57	1.61	22,388	21,192	17,987	0.15	0.53	0.15	0.15	0.10	0.10	N.R.	1.28	0.30	10
8	3.60	1.75	23,831	21,522	20,605	0.15	0.65	0.15	0.15	0.11	0.10	N.R.	1.27	0.29	11
9	3.51	1.78	23,999	21,797	22,853	0.15	0.57	0.15	0.15	0.11	0.10	N.R.	1.26	0.28	10
10	3.47	1.46	23,621	21,979	22,641	0.16	0.34	0.15	0.15	0.11	0.10	0.11	1.27	0.27	11
11	3.54	1.47	22,713	22,046	23,741	0.16	0.29	0.14	0.15	0.11	0.10	0.11	1.28	0.26	11
12	3.56	1.53e	22,397	22,075	23,106	0.16	0.28	0.15	0.15	0.11	0.10	0.12	1.29	0.26	13
13	3.52	1.58	20,008	21,916	21,769	0.15	0.29	0.15	0.15	0.11	0.10	0.12	1.32	0.28	12
14	3.67	1.74	21,013	21,852	20,254	0.15	0.32	0.15	0.15	0.11	0.11	0.12	1.32	0.27	13
15	3.67	1.83	20,997	21,795	19,327	0.16	0.32	0.15	0.15	0.11	0.11	0.12	1.32	0.27	12
16	3.65	1.72	19,062	21,624	18,988	0.16	0.47	0.15	0.15	0.11	0.11	0.10	1.31	0.25	14
17	3.56	1.55	20,105	21,535	19,130	0.16	0.22	0.15	0.15	0.11	0.11	0.09	1.31	0.24	13
18	3.29	1.24	19,292	21,410	20,002	0.16	0.19	0.16	0.15	0.12	0.11	N.R.	1.31	0.24	16
19	2.93	1.09	18,382	21,251	20,008	0.15	0.16	0.16	0.15	0.11	0.11	0.11	1.31	0.25	14
20	2.92	1.22	17,999	21,088	20,012	0.16	0.20	0.16	0.15	0.12	0.11	0.11	1.32	0.26	14
21	2.95	1.32	19,015	20,989	19,741	0.16	0.24	0.16	0.15	0.12	0.11	0.12	1.34	0.26	13
22	2.92	1.37	18,845	20,892	19,088	0.16	0.26	0.16	0.15	0.12	0.11	0.11	1.36	0.27	12
23	2.94	1.26	17,979	20,765	19,685	0.17	0.23	0.16	0.15	0.12	0.11	0.19	1.36	0.26	12
24	3.00	1.31	18,869	20,686	19,628	0.16	0.23	0.15	0.15	0.12	0.11	0.27	1.36	0.26	11
25	3.03	1.44	17,672	20,566	19,492	0.16	0.21	0.15	0.15	0.12	0.12	0.27	1.36	0.27	12
26	2.78	1.39	16,762	20,419	19,224	0.16	0.16	0.14	0.15	0.12	0.12	0.27	1.35	0.27	13
27	2.44	1.09	17,263	20,302	19,188	0.15	0.14	0.14	0.15	0.12	0.12	0.27	1.34	0.27	12
28	2.64	1.09e	16,826	20,178	19,079	0.14	0.26	0.14	0.15	0.12	0.12	0.26	1.34	0.27	12
29	2.91	1.38	17,521	20,087	18,944	0.15	0.72	0.14	0.15	0.12	0.12	0.26	1.34	0.26	13
30	2.93	1.33	15,877	19,946	19,150	0.16	0.64	0.14	0.15	0.12	0.12	0.25	1.35	0.25	11

Clifton Court Cl(mg/l)=200X EC - 2^f

N.R. = No Record.

N.C. = Not computed due to insufficient data.

f = Excess Delta conditions with fish concerns

r = Excess delta conditions with exc dm = Daily Mear

s = Balanced water conditions with :md = Mean Daily

Table 34. Pesticides, Herbicides, and Other Organic Substances Detected In the SWP

September 1998

Sampling Location	Sample Date 1/	Chemical Detected	Concentration µg/l 2/
North Bay Aqueduct At Barker Slough Pumping Plant	September-16-1998	None Detected	
California Aqueduct At Banks Pumping Plant	September-16-1998	2, 4-D MTBE	0.71 1.60
Delta Mendota Canal At McCabe Road	September-16-1998	2, 4-D MTBE	0.10 1.10
California Aqueduct Near Kettleman City (Check 21)	September-16-1998	2,4, - D	0.11
California Aqueduct At Tehachapi Afterbay (Check 41)	September-16-1998	None Detected	
Devil Canyon Power Plant At Entrance To Santa Ana Pipeline	September-16-1998	None Detected	

1/ Locations are normally sampled during March, June, and September. Monthly reports will include data for the month in which samples were most recently taken.

2/ Micrograms per liter.

Table 35. Oroville and Delta Field Divisions Energy Data

(in kWh)

September 1998

Date	Oroville Thermalito Complex		Barker Slough Pumping Plant Load	Cordelia Pumping Plant Load	Banks Pumping Plant		South Bay Pumping Plant Load	Del Valle Pumping Plant Load
	Generation	Load			Total Load	SWP Load		
1	12,837,312	0	35,924	27,972	1,990,080	1,990,080	355,480	269
2	12,930,912	0	40,607	33,271	1,390,464	1,390,464	345,645	271
3	12,063,456	0	36,071	27,615	1,931,904	1,931,904	322,470	268
4	12,768,768	0	42,357	34,699	2,272,512	2,272,512	283,320	277
5	4,305,600	0	40,502	29,071	2,248,896	2,248,896	313,880	270
6	6,992,928	288	35,805	26,488	2,897,856	2,897,856	302,845	277
7	13,179,456	0	41,307	32,900	2,596,992	2,596,992	292,020	303
8	10,579,680	2,592	41,993	33,537	1,738,176	1,738,176	299,760	302
9	7,703,136	0	34,468	27,482	2,260,416	2,260,416	176,855	311
10	11,191,392	0	31,171	25,326	1,889,280	1,889,280	269,495	269
11	8,053,056	0	33,117	28,539	2,258,112	2,258,112	305,380	312
12	7,148,448	0	38,150	29,855	2,725,056	2,725,056	288,610	303
13	4,757,760	3,456	39,361	29,015	3,518,976	3,518,976	304,725	306
14	11,025,216	2,880	33,810	28,399	2,391,744	2,391,744	305,030	298
15	7,531,776	3,168	34,573	27,881	1,601,664	1,601,664	321,000	255
16	9,364,032	3,744	37,541	29,533	2,403,264	2,403,264	302,195	222
17	10,499,328	3,168	31,535	25,949	1,893,120	1,893,120	305,745	194
18	7,853,760	1,728	31,017	29,211	1,951,104	1,951,104	303,820	177
19	4,294,944	2,304	20,349	28,623	2,733,888	2,733,888	283,100	162
20	2,868,768	0	14,497	25,536	3,196,224	3,196,224	297,995	178
21	9,492,192	2,880	14,945	24,661	2,383,104	2,383,104	312,120	184
22	12,390,048	2,304	17,430	28,735	2,391,168	2,391,168	269,415	193
23	11,949,408	0	15,673	25,872	2,520,384	2,520,384	236,515	193
24	7,602,624	3,168	19,012	29,995	2,395,200	2,395,200	261,375	187
25	7,529,760	0	18,809	28,126	3,255,168	3,255,168	259,840	175
26	5,260,608	0	9,744	18,942	3,398,400	3,398,400	249,140	159
27	4,427,136	576	9,709	18,102	3,281,472	3,281,472	231,640	163
28	8,254,080	0	12,446	20,489	3,188,736	3,188,736	191,665	178
29	10,602,720	3,168	12,789	21,007	2,839,296	2,839,296	139,785	171
30	8,326,368	2,304	12,327	19,306	3,648,192	3,648,192	147,715	174
Total	263,784,672	37,728	837,039	816,137	75,190,848	75,190,848	8,278,580	7,001

Table 36. San Luis Field Division Energy Data

(in kWh)

September 1998

Date	Dos Amigos Pumping Plant		Gianelli Pumping-Generating Plant			
	Total Load	SWP Load 1/	Total Generation	SWP Generation 1/	Total Load	SWP Load 1/
1	1,955,520	1,430,520	1,184,832	625,832	310,464	310,464
2	1,934,928	1,409,928	1,092,960	1,092,960	890,496	890,496
3	1,942,560	1,417,560	1,346,112	1,346,112	14,400	14,400
4	1,960,848	1,435,848	1,892,448	866,448	13,536	13,536
5	1,756,800	1,231,800	1,776,384	470,384	10,944	10,944
6	1,277,568	752,568	0	0	299,808	299,808
7	1,272,528	747,528	0	0	1,193,760	1,193,760
8	1,569,312	1,044,312	1,020,960	1,020,960	1,705,536	1,705,536
9	1,342,368	817,368	610,848	610,848	520,416	520,416
10	1,267,776	913,776	0	0	17,280	17,280
11	1,077,408	876,408	0	0	1,181,376	488,376
12	1,060,128	859,128	0	0	1,728,000	1,251,000
13	1,134,144	933,144	0	0	2,264,544	900,544
14	987,552	786,552	39,168	39,168	1,232,352	341,352
15	859,248	658,248	399,744	399,744	1,085,760	194,760
16	776,880	575,880	7,488	7,488	1,368,288	477,288
17	988,704	787,704	0	0	1,228,608	337,608
18	1,001,088	803,088	0	0	821,664	344,664
19	846,288	666,288	0	0	1,130,112	653,112
20	1,014,912	834,912	0	0	2,657,664	833,664
21	905,616	725,616	0	0	909,216	18,216
22	932,544	752,544	0	0	1,221,696	330,696
23	891,360	711,360	0	0	1,304,640	-360
24	882,288	702,288	0	0	477,792	63,792
25	1,332,864	1,152,864	0	0	2,187,360	1,773,360
26	894,960	744,960	0	0	1,849,824	1,849,824
27	835,632	689,632	0	0	3,330,720	1,122,720
28	860,832	710,832	0	0	1,907,424	1,493,424
29	901,728	751,728	0	0	1,915,200	1,501,200
30	1,009,728	859,728	0	0	1,544,832	1,130,832
Total	35,474,112	26,784,112	9,370,944	6,479,944	36,323,712	20,082,712

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping; adjustments to SWP water shares are made to balance the mismatch.

Table 37. San Joaquin Field Division Pumping Plant Energy Load Data

September 1998

(in kWh)

Date	Coastal Branch					California Aqueduct			
	Las Perillas	Badger Hill	Devils Den	Bluestone	Polonio	Buena Vista	Teerink	Chrisman	Edmonston
1	47,050	133,896	71,298	73,818	72,450	913,824	842,184	1,801,440	6,283,440
2	46,330	119,728	55,386	58,734	56,988	924,840	794,304	1,774,656	6,207,120
3	43,586	116,336	72,612	74,466	72,468	868,032	788,688	1,754,496	6,134,400
4	40,554	106,096	55,656	59,238	60,570	953,640	875,952	1,949,760	6,644,160
5	41,860	111,728	75,042	77,220	74,232	782,064	764,784	1,785,888	6,161,040
6	37,454	100,280	48,816	51,030	51,318	685,152	667,584	1,567,584	5,481,360
7	39,390	101,600	43,002	46,188	48,294	773,352	792,504	1,776,960	6,390,000
8	37,180	96,680	61,974	64,998	64,188	770,688	731,376	1,660,608	5,734,080
9	37,258	98,160	55,656	57,240	55,548	852,480	809,568	1,825,920	6,375,600
10	27,918	74,400	62,514	64,620	62,298	793,080	813,960	1,874,016	6,438,960
11	27,134	71,856	54,666	57,942	56,952	687,888	697,608	1,545,120	5,420,880
12	28,102	76,432	64,296	67,464	66,312	753,624	652,896	1,479,168	5,117,760
13	22,960	62,336	51,768	53,766	52,524	654,552	683,064	1,592,928	5,676,480
14	27,570	73,376	66,006	67,698	66,834	577,944	601,200	1,313,280	4,518,720
15	30,154	80,656	62,550	66,582	64,548	519,408	518,760	1,133,568	4,092,480
16	26,242	70,848	48,690	50,346	47,736	535,392	500,616	1,128,672	3,856,320
17	28,182	75,464	49,968	53,172	52,668	592,344	584,136	1,295,136	4,625,280
18	36,808	102,464	66,006	67,914	65,538	580,824	579,024	1,280,736	4,445,280
19	32,820	91,600	65,916	67,806	67,626	521,928	521,784	1,183,392	4,222,080
20	30,100	81,280	65,916	67,788	67,212	508,536	459,576	1,025,280	3,378,240
21	32,978	87,648	64,116	67,770	64,998	545,184	557,712	1,236,096	4,574,880
22	29,522	79,576	55,332	58,608	57,474	653,832	651,528	1,475,712	5,117,040
23	31,238	83,640	53,730	55,080	53,478	655,488	697,680	1,556,640	5,373,360
24	28,978	75,960	59,202	62,352	61,290	571,752	621,288	1,401,408	4,851,360
25	27,388	72,080	61,200	63,324	60,552	616,464	595,872	1,352,160	4,691,520
26	23,218	62,528	48,222	50,292	48,708	554,184	533,592	1,220,256	4,161,600
27	22,666	61,840	64,278	66,042	66,276	494,640	458,640	1,082,304	3,677,040
28	23,446	63,488	65,718	67,896	66,330	568,584	591,552	1,367,712	5,050,080
29	18,578	49,160	63,306	65,574	64,980	666,216	713,304	1,640,448	5,816,880
30	13,976	35,944	47,574	49,410	49,068	641,304	688,824	1,559,232	5,189,760
Total	940,640	2,517,080	1,780,416	1,854,378	1,819,458	20,217,240	19,789,560	44,640,576	155,707,200

Table 38. Southern Field Division Energy Data

(in kWh)

September 1998

Date	West Branch			East Branch			
	Oso	Warne	Castaic	Alamo	Pearblossom	Devil Canyon	Mojave Siphon
	Pumping Plant Load	Powerplant Generation	Powerplant SWP Generation	Powerplant Generation	Pumping Plant Load	Powerplant Generation	Powerplant Generation
1	249,984	709,704	384,000	224,924	843,156	1,950,720	141,981
2	182,504	549,216	384,000	232,680	1,167,300	2,196,864	148,239
3	161,392	395,496	384,000	246,260	1,281,528	2,141,664	124,887
4	236,544	401,112	384,000	239,064	945,024	2,033,184	83,328
5	297,752	427,320	384,000	191,520	1,095,216	1,185,888	130,620
6	157,024	117,432	384,000	223,804	1,096,488	1,108,704	117,558
7	221,928	927,648	384,000	224,364	1,206,756	2,048,352	164,955
8	150,528	420,912	384,000	233,772	1,302,648	1,850,496	139,755
9	183,792	439,704	384,000	251,916	1,244,976	1,930,752	142,947
10	251,384	334,224	384,000	226,212	1,317,612	1,768,608	176,673
11	150,640	337,464	384,000	218,260	1,111,848	1,617,312	112,560
12	214,032	335,088	384,000	179,928	863,940	1,090,656	86,016
13	158,032	0	384,000	233,100	919,152	676,704	120,015
14	129,752	335,160	480,000	171,136	665,532	1,826,496	57,456
15	123,648	335,376	480,000	158,256	845,244	1,553,280	84,567
16	185,136	334,728	480,000	124,040	475,128	1,248,672	66,444
17	183,400	414,648	480,000	160,776	741,552	1,432,800	100,443
18	163,632	457,560	480,000	160,412	726,348	1,267,104	147
19	131,376	429,480	480,000	170,632	600,900	1,028,640	96,621
20	7,952	68,112	480,000	171,612	609,432	813,120	72,702
21	178,528	432,288	480,000	164,472	843,636	1,777,536	98,784
22	175,112	428,904	480,000	189,588	922,836	928,704	82,068
23	231,336	449,856	480,000	181,188	818,436	1,552,608	113,946
24	165,032	445,032	480,000	184,884	886,812	2,015,712	90,027
25	182,056	476,352	480,000	166,152	684,612	1,396,224	104,895
26	205,576	442,800	480,000	130,368	528,072	495,936	59,934
27	131,992	0	480,000	128,016	444,240	771,072	23,730
28	192,920	441,432	480,000	180,404	803,796	1,840,896	59,472
29	186,592	429,408	480,000	224,980	1,120,032	2,175,552	130,263
30	237,776	442,656	480,000	164,640	853,140	1,665,312	96,222
Total	5,427,352	11,759,112	13,152,000	5,757,360	26,965,392	45,389,568	3,027,255